

Operating Instructions <Operations and Settings>

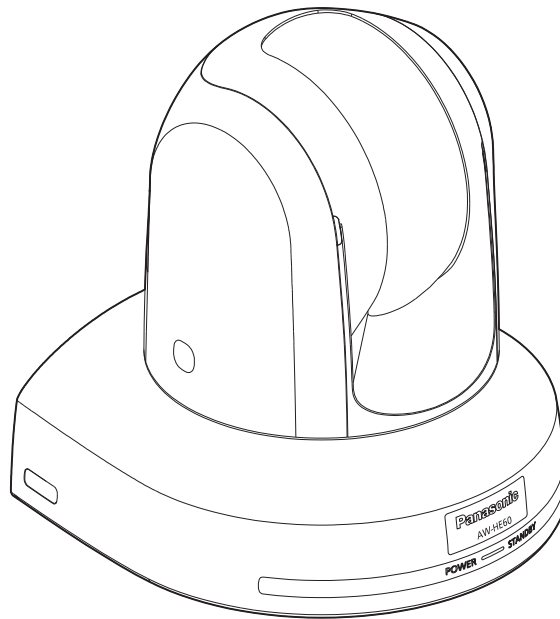
HD Integrated Camera

Model No. **AW-HE60HN**

Model No. **AW-HE60SN**

Model No. **AW-HE60HE**

Model No. **AW-HE60SE**



HDMI

- **How the Operating Instructions are configured**

<Basics>:

The <Basics> describes the procedure for basic operation and installation. Before installing this unit, be sure to take the time to read through <Basics> to ensure that the unit will be installed correctly.

<Operations and Settings> (this manual):

This <Operations and Settings> describes how to operate the unit and how to establish its settings.

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Distributing, copying, disassembling, reverse compiling, reverse engineering, and also exporting in violation of export laws of the software provided with this unit are expressly prohibited.

Abbreviations


The following abbreviations are used in this manual.

- Microsoft® Windows® 7 Professional SP1 32/64-bit is abbreviated to “Windows 7”.
- Microsoft® Windows® XP Professional SP3 and Microsoft® Windows® XP Home Edition SP3 are abbreviated to “Windows XP”.
- Windows® Internet Explorer® 8.0 and Windows® Internet Explorer® 9.0 are abbreviated to “Internet Explorer”.

For the purposes of this manual, the model numbers of the units are given as listed in the table below.

Model number of unit	Model number given in manual
AW-HE60HN	AW-HE60
AW-HE60HE	
AW-HE60SN	
AW-HE60SE	
AW-HE60HN	AW-HE60H
AW-HE60HE	
AW-HE60SN	AW-HE60S
AW-HE60SE	
AW-HS50N	AW-HS50
AW-HS50E	
AW-PS550N	AW-PS550
AW-PS550E	
AW-RP50N	AW-RP50
AW-RP50E	
AW-RP555N	AW-RP555
AW-RP555L	
AW-RP655N	AW-RP655
AW-RP655L	
AW-CA20T6G	AW-CA20T6

Illustrations and screen displays featured in the manual

- What is shown in the manual's illustrations and screen displays may differ from how it is actually appears.
- Functions which can be used by Windows only are indicated using the  mark.

Contents

Before use	4	Camera menu items	40
Overview	4	Setting the camera menu items	40
Required personal computer environment	4	Top Menu screen	40
Disclaimer of warranty	5	Camera screen (when FullAuto is selected)	41
Network security	5	Camera screen (when Manual1 to 3 is selected)	41
Concerning the plug-in viewer software	6	Contrast screen	42
Basic shooting operations	7	Picture 1/2 screen	43
How to turn the power on and off	8	Picture 2/2 screen	44
Turning the power on	8	16-axis color matrix	45
Turning the power off	9	System screen	46
Selecting the units.....	10	Genlock screen (AW-HE60S only)	46
Selecting the shooting modes (scene files).....	10	Output screen	47
Types of shooting modes	10	Other 1/2 screen	49
How to select the shooting mode	11	Other 2/2 screen	50
Shooting	13	Maintenance screen.....	51
What to do when encountering problems		Firmware Version screen	51
in the basic shooting operations.....	14	IP Network screen.....	52
More advanced operations	15	Camera menu item table	53
Manual shooting	16	Controls and settings from web screen	55
Manually adjusting the focus.....	16	Displaying the web screen	
Manually adjusting the iris.....	17	using a personal computer	56
Manually adjusting the shutter speed	18	Live screen: Single display mode	58
Manually adjusting the gain	19	Live screen: Multi display mode	63
Preset memories.....	20	Setup screen.....	64
White balance adjustment	23	Displaying the web screen using a mobile terminal	96
White balance adjustment.....	23	System log displays	100
Black level (master pedestal) adjustment	27	Limiters.....	101
Black level (master pedestal) adjustment.....	27	Setting/releasing the limiters	102
Genlock adjustment (AW-HE60S only)	29	Basic limiter operations.....	102
Genlock adjustment	29	Setting the limiters	102
Basic operations.....	32	Releasing the limiters.....	103
When performing the operations		Resetting the limiters	103
using the wireless remote control	34	Safe mode	104
Control exercised from the Multi-Function		Concerning the safe mode.....	104
Controller AW-RP655	35	Notes on Windows® 7	105
Control exercised from the Multi Hybrid		System requirements for a personal computer	105
Control Panel AW-RP555	37	Trademarks and Registered Trademarks	105
Control exercised from the Remote		Precautions when using Windows 7	106
Camera Controller AW-RP50	39	Index	111

Before use

■ Overview

- This unit is a compact full HD camera integrated with a pan-tilt head and featuring a 1/3-type full HD MOS sensor and digital signal processor (DSP).
- In addition to its optical 18× zoom lens, the unit comes with a 10× digital zoom to achieve high-quality shooting that overflows with ambiance.
- The unit features a night mode, making it possible to shoot even under very-low-brightness conditions by exposing subjects to infrared rays.
- Two models are available: the HDMI model AW-HE60H which is ideal for distributing the signals of TV conference and other video events, and the SDI output model AW-HE60S which is ideal for creating content. IP video transfer and IP control can be performed for both models.
It is also possible to connect to an existing camera controller using serial control.

■ Required personal computer environment

CPU	Intel® Core™2 DUO 2.4 GHz or faster or CPU with the equivalent specifications
Memory	[When using Windows] 512 MB or more (When using Microsoft® Windows® 7: 1 GB [32 bits] or 2 GB [64 bits] or more) [When using Mac OS X] 2 GB or more
Network function	10Base-T or 100Base-TX port × 1
Image display function	Resolution: 1024 × 768 pixels or more Color generation: True Color 24 bits or more
Supported operating system and Web browser	Microsoft® Windows® 7 Professional SP1 64-bit*1 Microsoft® Windows® 7 Professional SP1 32-bit*1 Windows® Internet Explorer® 8.0*2 Windows® Internet Explorer® 9.0*2
	Microsoft® Windows® XP Home Edition SP3*3 Microsoft® Windows® XP Professional Edition SP3*3
	Apple Mac OS X v10.5 Safari 5.0.6
	Apple Mac OS X v10.6 Safari 5.1.5
	Apple Mac OS X v10.7 Safari 5.1.5
	*1: This cannot be used in the Windows® XP compatibility mode. *2: This cannot be used with the 64-bit version of Internet Explorer® 8.0. *3: The Microsoft® Windows® XP Professional x64 Edition is not supported.
Other	CD-ROM drive (for using the Operating Instructions and various software) DirectX® 9.0c and up Adobe® Reader® (for browsing the Operating Instructions on the CD-ROM)

IMPORTANT

- **Failure to provide the required personal computer environment may slow down the delineation of the images on the screen, make it impossible for the web browser to work and cause other kinds of problems.**

Memo

- When using Microsoft® Windows® 7, refer to the “Notes on Windows® 7” (page 105) for details on the personal computer environment that is required and on the precautions and other items.
-

■ Disclaimer of warranty

IN NO EVENT SHALL Panasonic Corporation BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR REPLACEMENT OR REASONABLE MAINTENANCE OF THE PRODUCT, FOR THE CASES, INCLUDING BUT NOT LIMITED TO BELOW:

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- ④ INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
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- ⑥ ANY DEMANDS FOR COMPENSATION, CLAIMS, ETC. OCCASIONED BY THE INFRINGEMENT OF PRIVACY BY INDIVIDUALS OR ORGANIZATIONS WHOSE IMAGES WERE SHOT BY THE USER BECAUSE THESE IMAGES (INCLUDING THE RECORDINGS MADE) WERE MADE AVAILABLE BY THE USER BECAUSE IN THE PUBLIC DOMAIN FOR SOME REASON OR OTHER OR BECAUSE THE IMAGES ENDED UP BEING USED FOR PURPOSES OTHER THAN THE ONE DESCRIBED ABOVE;
- ⑦ LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE.

■ Network security

As you will use this unit connected to a network, your attention is called to the following security risks.

- ① Leakage or theft of information through this unit
- ② Use of this unit for illegal operations by persons with malicious intent
- ③ Interference with or stoppage of this unit by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this unit in a network secured by a firewall, etc.
- If this unit is connected to a network that includes personal computers, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated antivirus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized user name and password.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data and authentication information (user names and passwords).
- Do not install the camera in locations where the camera or the cables can be destroyed or damaged by persons with malicious intent.

Memo

Usage restrictions

Use of the same segment is recommended for the network in which the unit and the controller or personal computer are connected.

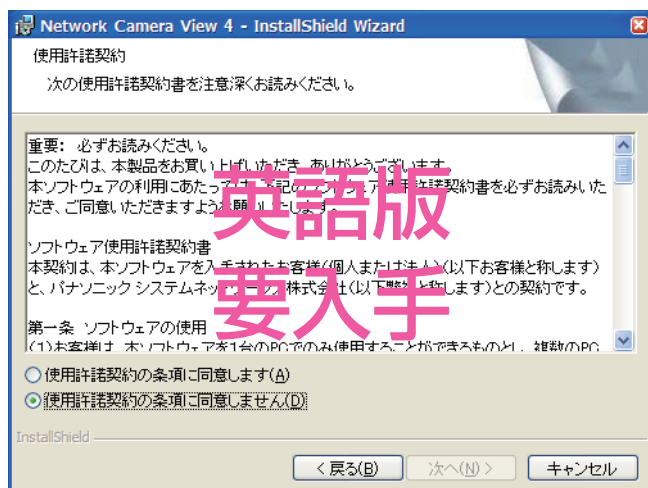
If the equipment uses connections with different segments, events based on the settings inherent to the network equipment, for instance, may occur so check this thoroughly prior to operation.

■ Concerning the plug-in viewer software

Windows

- This is necessary only when using a personal computer running Windows.

In order to display the IP videos on this unit, the “Network Camera View4” plug-in viewer software must be installed. Either install the software directly from the unit or click the [Install] button of the “plug-in viewer software” on the menu of the CD-ROM supplies, and follow the on-screen instructions to install the software.



✎ Memo ✎

- When the unit is purchased, “Automatic installation of viewer software” is set to “On”. Refer to page 65 if a message appears on the information bar of the browser.
- When a Live screen is first displayed from the personal computer, the screen on which to install ActiveX required to display the camera images appears. Follow the on-screen instructions to install the software.
- If the installation screen is displayed every time the screen is switched even after ActiveX has been installed, reboot the personal computer.
- A license to use the plug-in viewer software is required for every personal computer which uses the software. The number of times the plug-in software has been automatically installed can be checked on the “Product info. screen” (page 92) under “Maintenance” (page 91). Consult the dealer from whom you purchased the unit concerning these licenses.

Basic shooting operations

1 Set the subject brightness to the appropriate level.

With the basic operations, it is assumed that the focus, iris and white balance will be adjusted automatically (as per the factory settings).

2 Turn on the power of all the units and devices in the system.

If the settings have already been changed and the original settings are to be restored, refer to the “What to do when encountering problems in the basic shooting operations” (page 14) and “Camera screen” (page 41) in “Camera menu items”.

3 Select the unit to be operated.

Even when using only one unit, it must still be selected from the wireless remote control or controller.

4 Select the shooting mode.

Select one of the four (FullAuto, Manual1, Manual2 and Manual3) preset shooting modes (scene files), each of which corresponds to a set of circumstances in which the subject will be shot.

Select the mode that satisfies the shooting conditions and suits your preferences.

When continuing to shoot in the same circumstances, there is no need to select another mode.

5 Start shooting. (After shooting, turn off the power of all the units and devices in the system.)

Note

- If “FullAuto” has been selected as the setting for Scene on the camera menu, for example, all the auto settings will be turned on, and manual operations will no longer be possible for some of the items.

How to turn the power on and off

■ Turning the power on

When performing the operations using the wireless remote control

- 1 Set all the power switches of the units and devices connected in the system to ON.**
 - This unit does not have a power switch. When power is supplied to it, the status display lamp will light up orange. The initial operation is then performed, and after this the unit is set to the standby mode.

- 2 Press one of the [CAM1] to [CAM4] buttons on the wireless remote control to select the unit.**

- 3 Press the [ON/STANDBY] button on the wireless remote control for 2 seconds.**

The POWER ON mode is established, images are output, and control can be exercised.

- The unit's status display lamp now lights up green.

Notes

- It takes about 30 seconds per unit for the initial settings operation to be completed. During this period, the unit cannot be operated. (Status display lamp: light up orange)
- When transferring to the STAND BY mode**
(Status display lamp: Orange)
The pan/tilt position is stored in the memory, and the pan/tilt unit is moved so that it points backwards.
- When transferring to the POWER ON mode**
(Status display lamp: Green (after the initial setting operation is completed))
The pan/tilt unit is moved to the position which was stored in the memory when the transition to the STAND BY mode was made.
- POWER ON preset**
The pan/tilt unit is moved to the setting, which was established immediately prior to the transition to the STAND BY mode, when the power has been turned on.
- If the power is turned off without transferring to the STAND BY mode, the pan/tilt unit position will not be stored in the memory or reflected in the POWER ON preset. The zoom position is stored using the setting established immediately before the power is turned off.

- 4 If a multiple number of units are going to be used, repeat steps 2 and 3 as required.**

The unit's status display lamp blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

When performing the operations using the controller

■ When the AW-RP655 or AW-RP555 is connected:

- 1 Set all the power switches of the units and devices connected in the system to ON.**
 - This unit does not have a power switch. When power is supplied to it, the status display lamp will light up orange. The initial operation is then performed, and after this the unit is set to the standby mode.
- 2 Set the [OPERATE] switch on the controller to ON.**

The POWER ON mode is established, images are output, and control can be exercised.

 - The unit's status display lamp now lights up green.

Notes

- It takes about 30 seconds per unit for the initial settings operation to be completed. During this period, the unit cannot be operated. (Status display lamp: light up orange)
- When transferring to the STAND BY mode**
(Status display lamp: Orange)
The pan/tilt position is stored in the memory, and the pan/tilt unit is moved so that it points backwards.
- When transferring to the POWER ON mode**
(Status display lamp: Green (after the initial setting operation is completed))
The pan/tilt unit is moved to the position which was stored in the memory when the transition to the STAND BY mode was made.
- POWER ON preset**
The pan/tilt unit is moved to the setting, which was established immediately prior to the transition to the STAND BY mode, when the power has been turned on.
- If the power is turned off without transferring to the STAND BY mode, the pan/tilt unit position will not be stored in the memory or reflected in the POWER ON preset. The zoom position is stored using the setting established immediately before the power is turned off.

Before setting the [OPERATE] switch on the controller to ON, be absolutely sure to set all the power switches of the units and devices connected in the system to ON.

For further details, refer to the Operating Instructions of the controller.

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

How to turn the power on and off (continued)

■ Turning the power off

When performing the operations using the wireless remote control

- 1 Press one of the [CAM1] to [CAM4] buttons on the wireless remote control to select the unit.**
- 2 Press the [ON/STANDBY] button on the wireless remote control for 2 seconds.**
The unit's power is turned off.
 - The unit's status display lamp now lights up orange.
- 3 If a multiple number of units are going to be used, repeat steps 1 and 2 as required.**
- 4 Set all the power switches of the units and devices connected in the system to OFF.**

Notes

- **When transferring to the STAND BY mode**
(Status display lamp: Orange)
The pan/tilt position is stored in the memory, and the pan/tilt unit is moved so that it points backwards.
- **When transferring to the POWER ON mode**
(Status display lamp: Green (after the initial setting operation is completed))
The pan/tilt unit is moved to the position which was stored in the memory when the transition to the STAND BY mode was made.
- **POWER ON preset**
The pan/tilt unit is moved to the setting, which was established immediately prior to the transition to the STAND BY mode, when the power has been turned on.
- If the power is turned off without transferring to the STAND BY mode, the pan/tilt unit position will not be stored in the memory or reflected in the POWER ON preset. The zoom position is stored using the setting established immediately before the power is turned off.

When performing the operations using the controller

■ When the AW-RP655 or AW-RP555 is connected:

- 1 Set the [OPERATE] switch on the controller to OFF.**
The power of all the cameras (including the unit) connected to the controller is turned off.
 - The unit's status display lamp now lights up orange.
- 2 Set all the power switches of the units and devices connected in the system to OFF.**

Notes

- **When transferring to the STAND BY mode**
(Status display lamp: Orange)
The pan/tilt position is stored in the memory, and the pan/tilt unit is moved so that it points backwards.
- **When transferring to the POWER ON mode**
(Status display lamp: Green (after the initial setting operation is completed))
The pan/tilt unit is moved to the position which was stored in the memory when the transition to the STAND BY mode was made.
- **POWER ON preset**
The pan/tilt unit is moved to the setting, which was established immediately prior to the transition to the STAND BY mode, when the power has been turned on.
- If the power is turned off without transferring to the STAND BY mode, the pan/tilt unit position will not be stored in the memory or reflected in the POWER ON preset. The zoom position is stored using the setting established immediately before the power is turned off.

For further details, refer to the Operating Instructions of the controller.

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Selecting the units

Up to four units can be operated using one wireless remote control.

Up to five units and devices can be operated using one controller.

Select the unit (or units) to be operated from the wireless remote control or controller.

Even when using only one unit, it must still be selected.

When performing the operations using the wireless remote control

1 Press the [CAM1], [CAM2], [CAM3] or [CAM4] button.

The unit's status display lamp blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

When performing the operations using the controller

When the AW-RP655 is connected:

1 Press the [1], [2], [3], [4] or [5] button of [CONTROL/PREVIEW MONITOR OUT SEL].

When the AW-RP555 is connected:

1 Press the [1], [2], [3], [4] or [5] button of [CONTROL].

When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Selecting the shooting modes (scene files)

■ Types of shooting modes

This unit has four preset shooting modes, each of which corresponds to a set of circumstances in which the subject will be shot.

Select the mode that satisfies the shooting conditions and suits your preferences.

The settings can be changed by menu operations.

- The results of the white balance and other adjustments are stored in the memory separately by shooting mode. Be absolutely sure to select the shooting mode before making any adjustments.

Note

- If "FullAuto" has been selected as the setting for Scene on the camera menu, for example, all the auto settings will be turned on, and manual operations will no longer be possible for some of the items.

FullAuto

The shutter speed and lens iris setting are adjusted automatically.

Manual1

The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.

Manual2

The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.

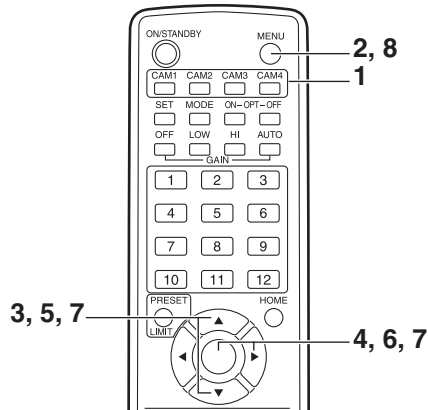
Manual3

The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.

Selecting the shooting modes (scene files) (continued)

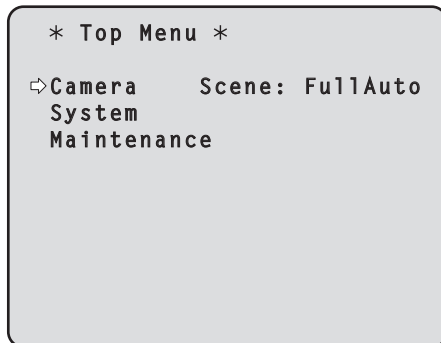
How to select the shooting mode

When performing the operations
using the wireless remote control



1 Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit.

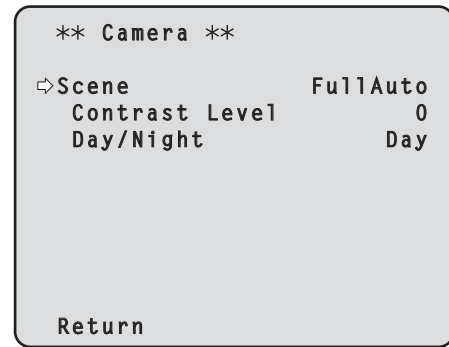
2 Press the [MENU] button for 2 seconds.
The Top Menu is displayed.



3 Press the [▲] or [▼] button to bring the cursor to "Camera".

4 Press the [OK] button.

The "Camera" sub-menu is displayed on the monitor.



5 Press the [▲] or [▼] button to bring the cursor to "Scene".

6 Press the [OK] button.

The shooting mode blinks.

7 Press the [▲] or [▼] button to select the shooting mode (FullAuto, Manual1, Manual2 or Manual3) to be used, and press the [OK] button to enter the selection.

8 Press the [MENU] button for 2 seconds.

The camera menu display is exited.

Selecting the shooting modes (scene files) (continued)

When performing the operations using the controller

When the AW-RP655 is connected:

- 1 Press one of the [1] to [5] buttons of [CONTROL/PREVIEW MONITOR OUT SEL] to select the unit which is to be operated.
- 2 Press the [MENU] button to set the LCD panel display to the menu mode.
- 3 Turn the jog dial (main) until CAMERA SETTING appears, and press the [OK] button.

CAMERA SETTING
→ OK Key

- 4 When the scene selection menu has appeared on the LCD panel, select the scene to be set, and press the [OK] button.

SCENE HALOGEN
→ OK Key

The scene names displayed on the LCD panel correlate with the scene files of the AW-HE60 as shown below.

AW-RP655 display	AW-HE60 scene file
HALOGEN	Manual1
FLUORESCENT	Manual2
OUTDOOR	Manual3
USER	FullAuto

- 5 When the following message appears on the LCD panel, press the [MENU] button twice to exit the menu mode.

OPEN CAMERA MENU ?
→ OK Key

When the AW-RP555 is connected:

- 1 Press the [1], [2], [3], [4] or [5] button of [CONTROL] to select the unit.
- 2 Press the [1], [2], [3] or [USER] button of [SCENE FILE] to select the shooting mode.

Shooting mode	[SCENE FILE] button
Manual1	[1]
Manual2	[2]
Manual3	[3]
FullAuto	[USER]

When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Shooting

When performing the operations using the wireless remote control

● Changing the camera's direction

Moving the camera toward the left or right (panning):
Press the [◀] or [▶] button.

Moving the camera up or down (tilting):
Press the [▲] or [▼] button.

Moving the camera diagonally:
Press the [▲] or [▼] button and [◀] or [▶] button at the same time.

Returning the camera to the reference position:
Press the [HOME] button for 2 seconds.

● Using the zoom function

Zooming in (the subject becomes magnified in size):
Press the [T] button of [ZOOM].

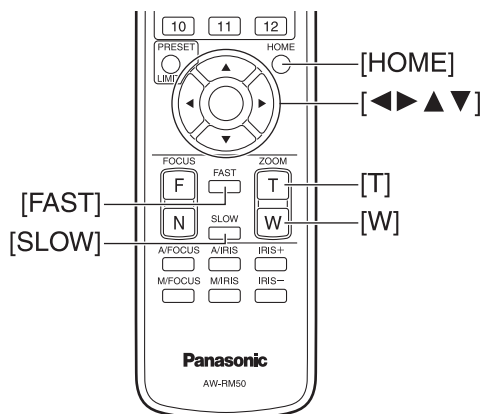
Zooming out (the subject becomes reduced in size):
Press the [W] button of [ZOOM].

● Switching the direction or zoom speed

Changing the direction or zoom at high speed:
Press the [FAST] button.
When this button is held down, the speed can be set to an even higher speed.
When it is tapped, the normal speed (high speed) is restored.

Changing the direction or zoom at low speed:
Press the [SLOW] button.
When this button is held down, the speed can be set to an even lower speed.
When it is tapped, the normal speed (low speed) is restored.

The lens focus control speed is also changed at the same time.



When performing the operations using the controller

● Changing the camera's direction

Moving the camera toward the left or right (panning):
Tilt the [PAN/TILT] lever toward L or R.

Moving the camera up or down (tilting):
Tilt the [PAN/TILT] lever toward UP or DOWN.

Moving the camera diagonally:
Tilt the [PAN/TILT] lever diagonally.

Returning the camera to the reference position:
If the controller has a [HOME] button, press the [HOME] button.

● Using the zoom function

Zooming in (the subject becomes magnified in size):
Tilt the [ZOOM] lever toward the TELE direction.

Zooming out (the subject becomes reduced in size):
Tilt the [ZOOM] lever toward the WIDE direction.

Note

- The indicator displays of the AW-RP655 are indicators that show the positions of the optical zoom. They will not work for electronic zooming.

● Changing the direction or zoom speed

AW-RP655 and AW-RP555

1 Press the [SPEED] button.

Each time the [SPEED] button is pressed, the control speed is switched between the high speed (the button's lamp is off) and low speed (the button's lamp is lighted). The lens focus control speed is also changed at the same time.

AW-RP50

Refer to the Operating Instructions of the controller.

What to do when encountering problems in the basic shooting operations

If the trouble is not resolved by taking the action suggested below, refer to “Troubleshooting” (page 43 in the <Basics>).

When performing the operations using the wireless remote control

The unit does not move.

- Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit which is to be operated.
If only one unit is being used, it is normally selected using the [CAM1] button.
- Check that the IR ID switches have been set correctly. (Refer to pages 37 and 40 in the <Basics>.)
- If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on.
Refer to “Turning the power on” (page 8), and turn on the power.
- If the unit's status display lamp does not blink even when the wireless remote control is operated near the unit's wireless remote control signal light-sensing area, it means that the wireless remote control's batteries have run down. Replace the batteries.

Multiple color bands (color bars) are displayed.

Press the [MODE] button to switch to the camera picture.

The menu screen is displayed.

Press the [MENU] button for 2 seconds to exit the camera menu.

The lens focus is not adjusted automatically.

Press the [A/FOCUS] button to switch to auto focusing. (Auto focusing does not work during panning or tilting operations.)

The camera picture is too light or too dark.

1. Press the [A/IRIS] button to switch the lens iris adjustment to auto.
2. Press the [AUTO] button of [GAIN] to switch the gain adjustment to auto.

Something is wrong with the coloring of the camera pictures.

Refer to “Auto tracking white adjustment (ATW)” (page 25), and switch to “ATW”.

The camera menus are not displayed.

When color bar signals are output, the camera menus are not displayed with composite signals.
To operate the camera menus with composite signals, set the color bar display to OFF.

When performing the operations using the controller

The unit does not move.

- Select the unit to be operated by following the procedure below.

When the AW-RP655 is connected:

Press the [1], [2], [3], [4] or [5] button of [CONTROL/PREVIEW MONITOR OUT SEL].

When the AW-RP555 is connected:

Press the [1], [2], [3], [4] or [5] button of [CONTROL].

When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

- If the [OPERATE] lamp on the controller is off, it means that the power of the controller is not on.
- If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on.
Refer to “Turning the power on” (page 8), and turn on the power.

Multiple color bands (color bars) are displayed.

Press the [MODE] button to switch to the camera picture.

The menu screen is displayed.

Press the [MENU] button to exit the camera menu.

The lens focus is not adjusted automatically.

Press the [EXT(AF)] button to switch to auto focusing. (Auto focusing does not work during panning or tilting operations.)

The camera picture is too light or too dark.

1. Press the [IRIS] button several times to turn on its lamp, and switch the lens iris adjustment to auto.
2. Press the [GAIN] button several times to turn on its lamp, and switch the gain adjustment to auto.

Something is wrong with the coloring of the camera pictures.

Refer to “Auto tracking white adjustment (ATW)” (page 25), and switch to “ATW”.

The camera menus are not displayed.

When color bar signals are output, the camera menus are not displayed with composite signals.
To operate the camera menus with composite signals, set the color bar display to OFF.

More advanced operations

Manual shooting (see pages 16 to 19)

- Manual adjustment of focus
- Manual adjustment of iris
- Manual adjustment of shutter speed
- Manual adjustment of gain

Black level (master pedestal) adjustment (see pages 27 to 28)

- This adjustment is performed to align the black level (pedestal level) of a multiple number of cameras.
- Ask your dealer to perform this adjustment.

Preset memories (see pages 20 to 22)

- Up to 100 settings for the camera direction (panning and tilting), zoom, focus, iris, gain up and white balance can be registered in the preset memories, and called.
- The number of settings that can be registered and called depends on the type of wireless remote control (12 settings) or controller that is used for operation.

Genlock adjustment (AW-HE60S only) (see pages 29 to 31)

- This adjustment is performed to achieve phase alignment by applying external synchronization (genlock) when a multiple number of cameras will be used or when the unit will be used in combination with other devices.
- Ask your dealer to perform this adjustment.

White balance adjustment (see pages 23 to 26)

- This adjustment is performed to express the white accurately. Its setting also has an effect on the color tones of the entire screen.
- It must be performed when using the unit for the first time or when the unit has not been used for a prolonged period.
- It must be performed when the lighting conditions or brightness has changed.
- Once the white balance has been attained, no further adjustment is required provided that the unit is going to be used under the same conditions.

Manual shooting

■ Manually adjusting the focus

The lens focus can be adjusted manually.

When performing the operations
using the wireless remote control

- 1 Press the [M/FOCUS] button to switch the focus to manual adjustment.**
- 2 Press the [F] or [N] button of [FOCUS] to adjust the focus.**

When the [F] button is pressed, the focus moves further away (far); conversely, when the [N] button is pressed, it moves nearer (near).
The speed of focusing and other adjustments can be switched to fast or slow by pressing the [FAST] or [SLOW] button, respectively.
- 3 If necessary, press the [A/FOCUS] button to return the focus to the automatic adjustment.**

When performing the operations using the controller

■ When the AW-RP655 is connected:

- 1 Press the [EXT(AF)] button to switch the focus to manual adjustment.**
- 2 Adjust the focus manually by turning the dial above the lit [FOCUS] lamp whether it is the lamp of the [PAN/TILT] lever or [ZOOM] lever.**

Furthermore, every time the [SPEED] button is pressed, the speed of the focusing and other adjustments can be switched to fast or slow.
- 3 If necessary, press the [EXT(AF)] button to return the focus to the automatic adjustment.**

■ When the AW-RP555 is connected:

- 1 Press the [(AF)EXT] button to switch the focus to manual adjustment.**
- 2 Adjust the focus manually by tilting the [FOCUS] lever.**

Furthermore, every time the [SPEED] button is pressed, the speed of the focusing and other adjustments can be switched to fast or slow.
- 3 If necessary, press the [(AF)EXT] button to return the focus to the automatic adjustment.**

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Note

- When the focus is set to manual, the subject may go out of focus during panning, tilting and zooming. Therefore, the unit comes with a function which compensates for this. (Focus compensation during zooming function: Focus ADJ With PTZ.) This function was set to ON at the factory. If the function has been set to OFF, either adjust the focus, as required, after zooming or set the focus to auto. (See page 49 and page 81.)

Manual shooting (continued)

■ Manually adjusting the iris

The lens iris can be adjusted manually.

When performing the operations
using the wireless remote control

- 1 Press the [M/IRIS] button to switch the iris to manual adjustment.**
- 2 Adjust the iris using the [IRIS +] or [IRIS –] button.**
Press the [IRIS +] button to adjust the lens iris in the opening direction; conversely, press the [IRIS –] button to adjust the lens iris in the closing direction.
- 3 If necessary, press the [A/IRIS] button to return the iris to the automatic adjustment.**

When performing the operations using the controller

■ When the AW-RP655 is connected:

- 1 Press the [IRIS] button several times to turn off the button's lamp and switch to manual adjustment.**
- 2 Adjust the iris manually by turning the dial above the lit [IRIS] lamp whether it is the lamp of the [PAN/TILT] lever or [ZOOM] lever.**
- 3 If necessary, press the [IRIS] button several times and turn on its lamp to return the iris to the automatic adjustment.**

■ When the AW-RP555 is connected:

- 1 Press the [IRIS] button to turn off its lamp and switch to manual adjustment.**
- 2 Turn the [LEVEL] dial of [IRIS] to adjust the iris manually.**
The position of the [LEVEL] dial does not represent an absolute value.
This is why the brightness may differ from one camera to another even when the dial is set to the same position.
- 3 If necessary, press the [IRIS] button to turn on its lamp and switch to automatic adjustment in order to return the iris to automatic adjustment.**

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Memo

- In the night mode, the iris is set to open as a theft prevention measures.
Adjust the brightness at the light source.

■ Manually adjusting the shutter speed

The shutter speed can be set using two methods. One is a method that specifies the time (where a time such as 1/250 sec. is designated), and the other is a method that specifies the frequency (where synchro scan, 60.24 Hz*, etc. is designated).

When shooting a TV screen or PC monitor screen, the horizontal noise generated when the screen is shot can be minimized by adjusting the frequency to the screen frequency using synchro scan.

*: This describes when the AW-HE60HN/AW-HE60SN is used.

When performing the operations using the wireless remote control

Perform the adjustments on the Camera menu. For further details, refer to the [Shutter Mode] and [Step/Synchro] items on page 42.

When performing the operations using the controller

The procedure is the same as for “When performing the operations using the wireless remote control” in “Basic operations” (pages 32 to 39).

■ When the AW-RP555 is connected:

1 Press the [SHUTTER] button and turn its lamp on.

The shutter speed set ahead of time is selected.

2 If necessary, press the [SHUTTER] button to turn its lamp off in order to return the shutter to the OFF setting.

● How to set the shutter speed using the AW-RP555

1 With the [MEMORY] button still held down, press the [SHUTTER] button.

The [PRESET] [1] to [5] and [6] to [10] buttons blink alternately.

2 Press one of the [1] to [8] buttons or the [10] [PRESET] button — whichever button corresponds to the shutter speed which is to be set.

Any of the shutter speeds in the table below can be set.

[When 59.94 Hz has been set as the unit's frequency]

[1]	[2]	[3]	[4]	[5]
1/100	1/250	1/500	1/1000	1/2000
[6]	[7]	[8]		[10]
1/4000	1/10000	Synchro Scan		OFF

[When 50 Hz has been set as the unit's frequency]

[1]	[2]	[3]	[4]	[5]
1/120	1/250	1/500	1/1000	1/2000
[6]	[7]	[8]		[10]
1/4000	1/10000	Synchro Scan		OFF

- Any change in the shutter speed is reflected the next time the [SHUTTER] button is pressed and its lamp is turned on.
- When OFF is selected, the shutter will not operate even when the [SHUTTER] button is pressed.
- Select the synchro scan setting on the menu.
- The shutter speed setting performed here is stored in the memory even when the power of the AW-RP555 is turned off.

For further details, refer to the Operating Instructions of the AW-RP555.

Manual shooting (continued)

■ Manually adjusting the gain

There are two ways to adjust the gain. One way involves using the buttons on the wireless remote control or controller; the other way involves using the Camera menu or Web setting.

The gain can be adjusted more precisely using the Camera menu or Web setting.

For further details, refer to the [Gain] item on page 42 and page 72.

Note

- When adjusting the gain, the light quantity may change suddenly (causing the image output to be subjected to a shock).

When performing the operations using the wireless remote control

1 Press the [OFF], [LOW] or [HI] button.

These buttons enable the gain increase to be selected in three steps.

[LOW] is used to select 9 dB; [HI] is used to select 18 dB.

2 If necessary, press the [AUTO] button in order to return the gain to the automatic adjustment (AGC).

When performing the operations using the controller

■ When the AW-RP655 is connected:

1 Press the [GAIN] button to turn off its lamp, and then switch to manual adjustment.

The preset gain increase amount is now selected.

For further details on the gain increase amount setting, refer to the Operating Instructions of the AW-RP655.

2 If necessary, press the [GAIN] button and turn on the button in order to return the gain to the automatic adjustment (AGC).

■ When the AW-RP555 is connected:

1 Press the [GAIN] button to turn off its lamp.

Each time this button is pressed, one of the three gain increase amounts can be selected in sequence.

The current status is displayed as follows.

	[MANU] [L] lamp	[MANU] [H] lamp	[GAIN] button
0 dB	Off	Off	Off
LOW	Lit	Off	Off
HIGH	Off	Lit	Off
AUTO	Off	Off	Lit
Other	Lit	Lit	Off

2 If necessary, press the [GAIN] button several times and turn on its lamp in order to return the gain to the automatic adjustment (AGC).

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

In any case, the maximum gain of the automatic adjustment can be set by the camera menu or Web setting.

For further details, refer to the [AGC Max Gain] item on page 42 and page 72.

Preset memories

This unit enables up to 100 settings for the camera direction (panning and tilting), zoom, focus, iris, gain and white balance to be registered in its preset memories, and called. However, the number of settings that can be registered and called depends on the type of wireless remote control or controller that is used for operation.

- The focus and iris operating modes (manual and auto settings) are neither registered nor recalled. The current focus and iris values are registered.
- The focus and iris values can be recalled only when the manual settings are applicable.
- AWB A, AWB B or ATW is registered as the white balance setting. The values selected when AWB was established are recalled as the adjustment values of AWB A or AWB B.
- The AWB Mode (ATW, AWB A or AWB B) stored using the AW-RP655 are recalled only when the AW-RP655 is connected.

Notes

- When there is a large difference in the environmental temperature between the time of registration and the time the setting is called, displacement of the preset position may occur.
- If displacement occurs, perform registration again.
- While preset settings are being called, it is not possible to perform manual operations such as panning, tilting, zooming or iris adjustments.
- If, when one set of preset settings has been called, another set of preset settings is then called, the first set of preset settings which have been called will take precedence.

When performing the operations using the wireless remote control

Twelve settings (preset No.1 to No.12) can be registered and called using the wireless remote control. The [1] to [12] buttons correspond to the unit's preset memories No.1 to No.12.

● Registering the settings in the preset memories

1 Display the picture to be shot on the monitor.

Operate the pan, tilt or zoom buttons to determine the camera angle.

Adjust the focus, iris, gain and white balance if they need to be adjusted.

2 While holding down the [PRESET] button, press the button corresponding to the preset memory number.

- If a preset memory number with an already registered setting has been selected, the existing setting will be erased and replaced with the new one.

● Calling the settings of the preset memories

1 Press the button in which the preset memory setting has been registered.

Preset memories (continued)

When performing the operations using the controller

When the AW-RP655 is connected:

Up to 50 settings can be registered and called.
The [1] to [50] buttons of [TRACING/PRESET MEMORY] correspond to the unit's preset memories No.1 to No.50.

● Registering the settings in the preset memories

1 Set to the preset memory mode.

Press the [TR/PSET] button to turn off its lamp.

2 Set to the memory recording mode.

Press the [M.LOCK] button to turn off its lamp.

3 Display the picture to be shot on the monitor.

Operate the [PAN/TILT] lever and [ZOOM] lever to determine the camera angle.
Adjust the focus, iris, gain and white balance if they need to be adjusted.

4 Hold down the [MEMORY] button.

The buttons among the [1] to [50] buttons of [TRACING/PRESET MEMORY] in which settings can be registered now start blinking in sequence.

- Preset memory settings cannot be registered in buttons whose lamps are off (since they contain tracing memory settings).

5 With the [MEMORY] button still held down, press the button of the preset memory number in which the setting is to be registered.

● Calling the settings of the preset memories

1 Set to the preset memory mode.

Press the [TR/PSET] button to turn off its lamp.

2 Press the button among the [1] to [50] buttons of [TRACING/PRESET MEMORY] in which the setting was registered.

● Erasing preset memory settings

1 Set to the preset memory mode.

Press the [TR/PSET] button to turn off its lamp.

2 Set the memory recording mode.

Press the [M.LOCK] button to turn off its lamp.

3 Hold down the [RESET] button.

The buttons among the [1] to [50] buttons of [TRACING/PRESET MEMORY] whose settings can be erased now start blinking in sequence.

- The settings for the buttons whose lamps are off cannot be erased (since they contain tracing memory settings).

4 With the [RESET] button still held down, press the button of the preset memory number whose setting is to be erased.

Preset memories (continued)

When the AW-RP555 is connected:

Up to 10 settings can be registered and called.
The [1] to [10] buttons of [PRESET] correspond to the unit's preset memories No.1 to No.10.

When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

● Registering the settings in the preset memories

1 Display the picture to be shot on the monitor.

Operate the [PAN/TILT] lever and [ZOOM] lever to determine the camera angle.
Adjust the focus, iris, gain and white balance if they need to be adjusted.

2 Hold down the [MEMORY] button.

The buttons among the [1] to [10] buttons of [PRESET] in which settings can be registered now start blinking in sequence.

3 With the [MEMORY] button still held down, press the button of the preset memory number in which the setting is to be registered.

● Calling the settings of the preset memories

1 Press the button among the [1] to [10] buttons of [PRESET] in which the desired setting was registered.

White balance adjustment

■ White balance adjustment

In order for the white to be reproduced accurately, the ratio between the three primary colors (RGB) is adjusted. If the white balance has shifted out of adjustment, not only will the white be reproduced poorly but the color tones of the entire screen will also be degraded.

- **This adjustment must be performed when using the unit for the first time or when the unit has not been used for a prolonged period.**
- **It must be performed when the lighting conditions or brightness has changed.**

As the type of adjustment used, AWB (automatic white balance adjustment) which is used to adjust the white balance when the AWB button on the controller is pressed, ATW (automatic tracking white balance adjustment) which is used to keep adjusting the white balance at all times, or manual adjustment can be selected.

The results of the AWB adjustment can be stored in two memories, A and B, when “AWB A” or “AWB B” has been selected for the white balance.

- Once the white balance values have been adjusted, their setup procedure will be completed simply by selecting them using the camera menus or web settings, or by pressing the buttons on the controller, provided that they are going to be used under the same conditions as the ones established when the values were set.
There is no need to set it again.
- Once a new setting is entered, the previous setting will be erased.

Use the two memories to store settings corresponding to different shooting conditions.

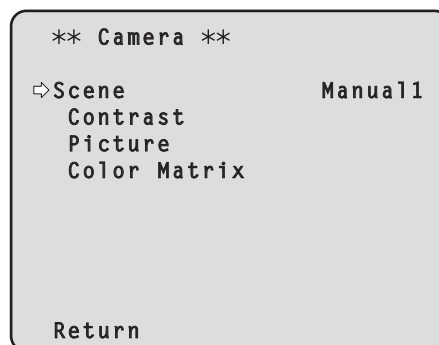
● Automatic adjustment (AWB: AWB A or AWB B)

When performing the operations
using the wireless remote control

- 1 Shoot a white subject (such as a white wall or handkerchief) so that it fills the screen.**
 - Do not shoot shiny or very bright objects.

- Steps **2** through **8** represent the procedure for selecting the “AWB A” or “AWB B” memory. They need not be taken if a selection has already been made.

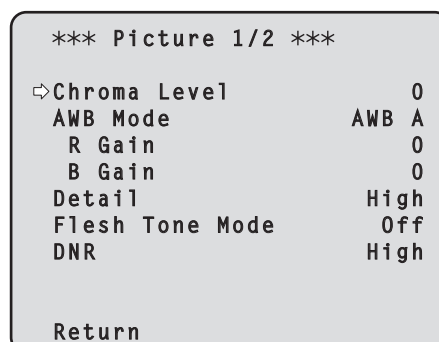
- 2 Select Manual1, Manual2 or Manual3 as the shooting mode by following the procedure in “Selecting the shooting modes (scene files)” (page 11).**



- 3 Press the [▲] or [▼] button to bring the cursor to “Picture”.**

- 4 Press the [○] button.**

The “Picture 1/2” sub-menu is displayed.



White balance adjustment (continued)

- 5** Press the [▲] or [▼] button to bring the cursor to “AWB Mode”.

- 6** Press the [○] button.
“AWB Mode” starts blinking.

- 7** Press the [▲] or [▼] button to change the AWB mode to be used to “AWB A” or “AWB B”, and press the [○] button to enter the selection.

- 8** Press the [MENU] button for 2 seconds.
The camera menu display is exited.

- 9** Press the [SET] button for 2 seconds.
The auto white balance adjustment (AWB) is performed, and the white balance setting is entered.
- When the white balance adjustment is completed successfully, “AWB OK” appears in the center of the screen.



Note

- The white balance cannot be adjusted when color bars are displayed. Press the [MODE] button to switch to the camera picture.
- When the adjustment has failed, an error message such as “OUT RANGE NG”, “HIGH LIGHT NG”, “LOW LIGHT NG” or “ATW NG” is displayed.

When performing the operations using the controller

When the AW-RP655 or AW-RP555 is connected:

- 1** Shoot a white subject (such as a white wall or handkerchief) so that it fills the screen.

- Do not shoot shiny or very bright objects.

- 2** Press the [A] button or [B] button of [WHITE BAL] to select “AWB A” or “AWB B” for the white balance.

The selected button's lamp lights.

- The white balance setting is not entered if “ATW” has been selected.

- 3** Press the [AWC] button.

The auto white balance adjustment (AWB) is executed, and the white balance setting is entered.

The [AWC] button's lamp blinks while the white balance is being adjusted, and its lamp goes off when the adjustment is completed successfully. Its lamp lights if the white balance could not be adjusted.

- If color bars have been selected (the [MODE] button or [BAR/CAM] button's lamp lights) or if ATW is selected (the [ATW] button's lamp lights), it means that the [AWC] button is not working or that the auto white balance adjustment has failed. (The button's lamp lights.)

White balance adjustment (continued)

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Notes

- White balance may not be correctly set if the lighting of the object is too weak.
- Since the unit has a built-in memory, the set white balance will remain in the memory even if power is turned off. Therefore, it is not necessary to reset the white balance if the color temperature of those objects remains unchanged. However, it must be reset if the color temperature changes, such as when you move from indoors to outside, or vice versa.

● Auto tracking white adjustment (ATW)

When the white balance adjustment is set to “ATW”, the white balance continues to be adjusted automatically all the time, and it is automatically corrected even when the light source or color temperature has changed to produce completely natural pictures.

This function works when “ATW” is selected instead of “AWB A” or “AWB B” by following the steps for “Automatic adjustment” in “White balance adjustment” (page 23).

Notes

- ATW might not function properly when high brightness light (ex. fluorescent lamp) beams into a screen.
- White balance may not be accurately set if there is no white object in the scene being shot.
- The white balance may shift out of adjustment when a different kind of light source such as sunlight or fluorescent lighting applies.

White balance adjustment (continued)

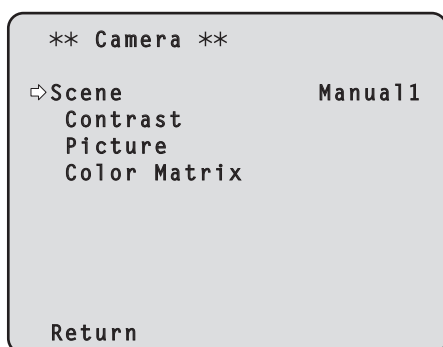
● Manual adjustment (R gain and B gain adjustment)

White balance can be adjusted manually.

When performing the operations
using the wireless remote control

- Steps 1 through 6 represent the procedure for selecting the “AWB A” or “AWB B” memory. They need not be taken if a selection has already been made.

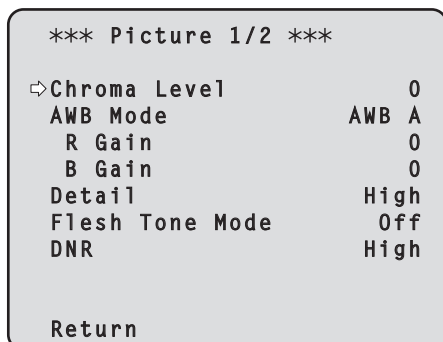
- 1 Select Manual1, Manual2 or Manual3 as the shooting mode by following the procedure in “Selecting the shooting modes (scene files)” (page 11).



- 2 Press the [▲] or [▼] button to bring the cursor to “Picture”.

- 3 Press the [○] button.

The “Picture 1/2” sub-menu is displayed.



- 4 Press the [▲] or [▼] button to bring the cursor to “AWB Mode”.

- 5 Press the [○] button.

“AWB Mode” starts blinking.

- 6 Press the [▲] or [▼] button to change the AWB mode to be used to “AWB A” or “AWB B”, and press the [○] button to enter the selection.

- 7 Press the [▲] or [▼] button to bring the cursor to “R Gain” or “B Gain.”

- 8 Press the [○] button to make the “R Gain” or “B Gain” value blink.

- 9 Press the [▲] or [▼] button to change the “RGain” or “BGain” numerical value, and press the [○] button to enter the setting.

When performing the operations using the controller

When the AW-RP655 is connected:

- 1 Press the [R/B GAIN/PED] button several times so that the “GAIN” item is displayed on the LCD panel.

- 2 Adjust the R Gain value using the jog dial (L).

- 3 Adjust the B Gain value using the jog dial (R).

When the AW-RP555 is connected:

Refer to the Operating Instructions of the controller.

When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

Black level (master pedestal) adjustment

■ Black level (master pedestal) adjustment

The black level can be adjusted when using a multiple number of cameras including the unit. Ask your dealer to perform this adjustment.

(Use an oscilloscope or waveform monitor for the adjustment.)

Adjust the black level in accordance with the units and devices used.

The black level can be adjusted only when Manual1, Manual2 or Manual3 is selected as the shooting mode (scene file).

When performing the operations using the wireless remote control

1 Press the [M/IRIS] button.

Set the iris to the manual mode.

2 Press the [IRIS -] button.

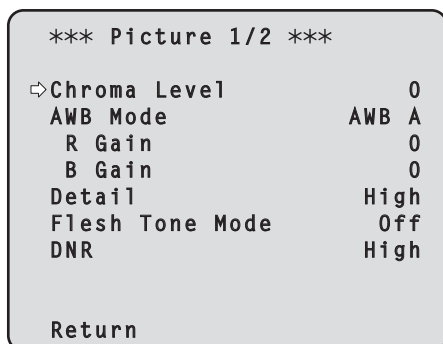
The lens iris is stopped down.

3 Select Manual1, Manual2 or Manual3 by following the procedure in “How to select the shooting mode” (page 11) under “Selecting the shooting modes (scene files)”.

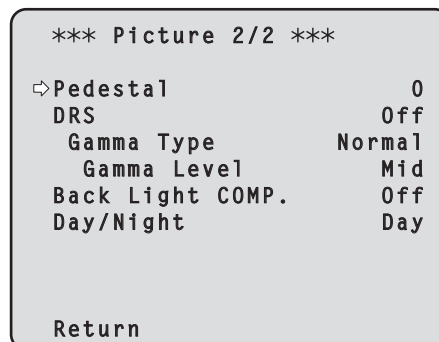
4 Press the [▲] or [▼] button to bring the cursor to “Picture”.

5 Press the [○] button.

The “Picture 1/2” sub-menu is displayed.



6 Press the [▲] or [▼] button to move to the “Picture 2/2” sub-menu, and bring the cursor to “Pedestal”.



7 Press the [○] button to start the “Pedestal” value blinking.

8 Press the [▲] or [▼] button, change the “Pedestal” value, and press the [○] button to enter the selection.

Adjust the black level to a value of approx. 0.035 V.



9 Press the [MENU] button for 2 seconds.

The camera menu display is exited.

10 If necessary, press the [A/IRIS] button to adjust the iris automatically.

Black level (master pedestal) adjustment (continued)

When performing the operations using the controller

■ When the AW-RP655 is connected:

- 1** Press the [IRIS] button several times to turn off its lamp.
Set the iris to the manual ([MANU]) mode.
- 2** Turn the [FOCUS/IRIS] dial to stop down the lens iris.
- 3** Press the [R/B GAIN/PED] button several times so that the “PEDESTAL TOTAL” item is displayed on the LCD panel.
- 4** Turn the jog dial (main) and adjust the black level to 0.035 V.
- 5** If necessary, adjust the iris automatically.
→ Press the [IRIS] button several times to turn on its lamp.

■ When the AW-RP555 is connected:

- 1** Press the [IRIS] button several times to turn off its lamp.
Set the iris to the manual ([MANU]) mode.
- 2** Turn the [LEVEL] dial of [IRIS] to stop down the lens iris.
- 3** Follow the operation steps in “Basic operations” (page 38), and use the camera menu to perform the adjustment.

■ When the AW-RP50 is connected:

Refer to the Operating Instructions of the controller.

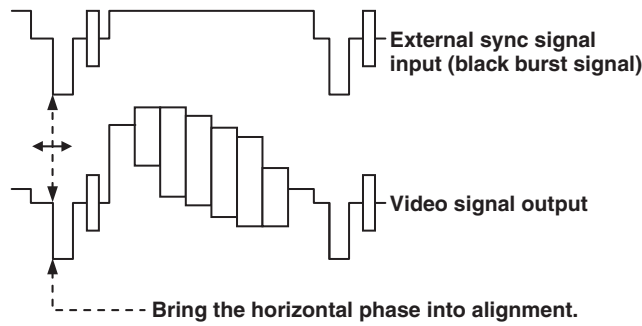
Genlock adjustment (AW-HE60S only)

■ Genlock adjustment

The genlock adjustment is performed to achieve phase alignment by applying external synchronization (genlock) when a multiple number of cameras will be used or when the unit will be used in combination with other devices. This unit supports the BBS signal as the genlock signal. Ask your dealer to perform this adjustment.
(Use a dual-trace oscilloscope for the adjustment.)
(The genlock function is not available with the AW-HE60H.)

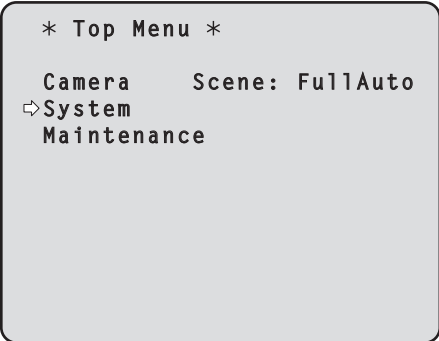
● Horizontal phase adjustment

Observe the waveforms of the external sync signal input (black burst signal) and video signal output on the dual-trace oscilloscope, and use the wireless remote control or controller to bring the horizontal phase into alignment.



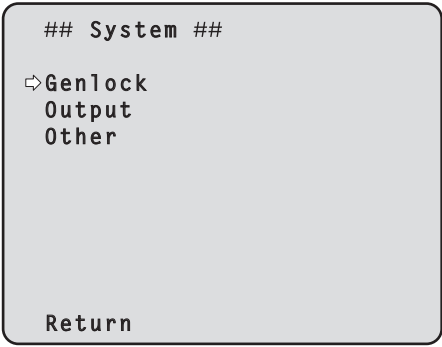
When performing the operations using the wireless remote control

- 1 Follow the operation steps in “Basic operations” (page 34) to display the Top Menu.
- 2 Press the [▲] or [▼] button to bring the cursor to “System”.



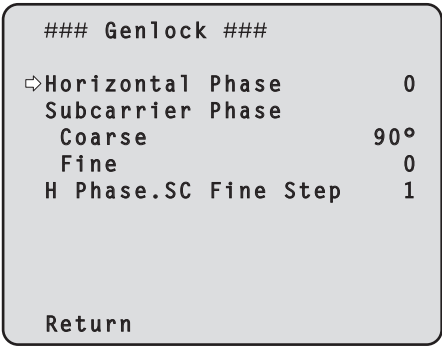
- 3 Press the [○] button.

The “System” sub-menu is displayed.



- 4 Press the [▲] or [▼] button to bring the cursor to “Genlock”, and press the [○] button.

The “Genlock” sub-menu is displayed.



- 5 Press the [▲] or [▼] button to bring the cursor to “Horizontal Phase”, and press the [○] button.

The “Horizontal Phase” value starts blinking.

- 6 Press the [▲] or [▼] button to change the “Horizontal Phase” value, adjust the value so that the horizontal phase is brought into alignment, and press the [○] button.

- 7 Press the [MENU] button for 2 seconds.

The camera menu display is exited.

When performing the operations using the controller

These operations can be performed using the camera menus by following the operation steps in “Basic operations” (pages 32 to 39).

Genlock adjustment (AW-HE60S only) (continued)

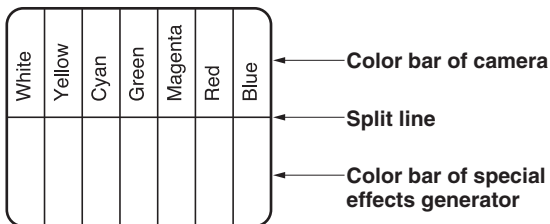
● Color phase adjustment

The color phase adjustment must be performed if the pictures are to be switched using a video switcher or other device when the video output signals have been set as composite signals.

It need not be performed when the video output signals have been set as component signals.

The camera's color phase is aligned with the program output (split color bar output) signals of a color special effect device or other color tones that will serve as the reference.

(The color phase can be adjusted more accurately if a vectorscope is used for the adjustment.)



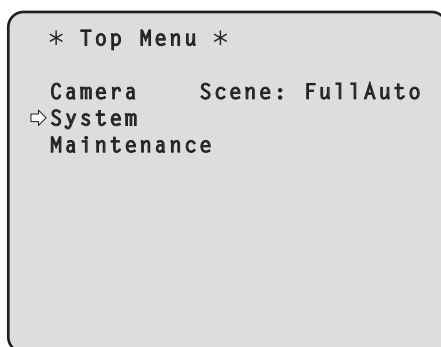
When performing the operations
using the wireless remote control

1 Press the [MODE] button.

The mode is switched to the color bar display.

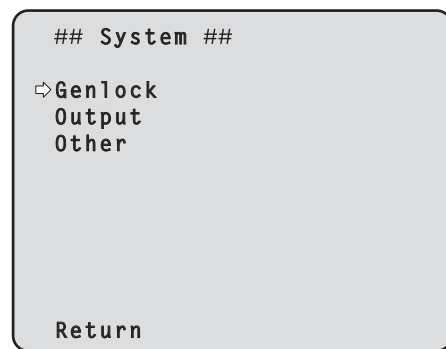
2 Follow the operation steps in “Basic operations” (page 34) to display the Top Menu.

3 Press the [▲] or [▼] button to bring the cursor to “System”.



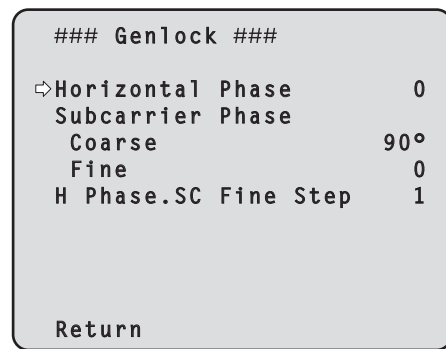
4 Press the [○] button.

The “System” sub-menu is displayed.



5 Press the [▲] or [▼] button to bring the cursor to “Genlock”, and press the [○] button.

The “Genlock” sub-menu is displayed.



6 Press the [▲] or [▼] button to bring the cursor to “Coarse” or “Fine” of “Subcarrier Phase”, and press the [○] button.

The “Coarse” or “Fine” value starts blinking.

7 Press the [▲] or [▼] button to change the “Coarse” or “Fine” value of “Subcarrier Phase”, adjust the value so that the color phase is brought into alignment, and press the [○] button.

8 Press the [MENU] button for 2 seconds.

The menu display is exited.

9 Press the [MODE] button.

The mode is switched to the camera picture display.

Genlock adjustment (AW-HE60S only) (continued)

When performing the operations using the controller

These operations can be performed using the camera menus by following the operation steps in “Basic operations” (pages 32 to 39).

To switch between “BAR” (color bar display) and “CAM” (camera pictures), press the [MODE] or [BAR/CAM] button.

Basic operations

Camera menus are displayed on the monitor when the unit's settings are to be selected.

The monitor is connected to the video signal output connector.

The basic camera menu operations involve displaying sub-menus from the Top Menu items, and selecting settings on the sub-menus.

Some sub-menus have menu items for performing more detailed settings.

Only the steps taken using the wireless remote control will be described here for the operations conducted to select and set the items. For details of the operations conducted using the controller, substitute “controller” for “wireless remote control” when reading the basic operations. Also, refer to the Operating Instructions of the controller.

The camera menu operations are conducted using the wireless remote control.

If a controller is connected, they can also be conducted using the controller.

- It may be necessary to upgrade the controller's version in order to support the AW-HE60.

For further details, consult with your dealer.

Described below are the basic operations for changing the camera menu item settings using the wireless remote control and controller (AW-RP655, AW-RP555 or AW-RP50).

Table of operations

Camera menu operation	Wireless remote control	Controller		
		AW-RP655	AW-RP555	AW-RP50
Selecting the unit to be operated	Press the [CAM1], [CAM2], [CAM3] or [CAM4] button.	Press one of the [1] to [5] buttons of [CONTROL/ PREVIEW MONITOR OUT SEL].	Press one of the [1] to [5] buttons of [CONTROL].	Press one of the [CAMERA STATUS/SELECTION] buttons.
Displaying the Top Menu	Press the [MENU] button for 2 seconds.	<ol style="list-style-type: none"> 1. Press the [MENU] button. The display on the AW-RP655's LCD panel changes to the menu mode. 2. Turn the jog dial (main) to display "CAMERA SETTING" on the LCD panel, and press the [OK] button. 3. The scene selection menu now appears on the LCD panel so select the scene to be set, and press the [OK] button. 4. If the "OPEN CAMERA MENU? → OK Key" message appears on the LCD panel, press the [OK] button again. 	Press the [MENU] button for 2 seconds.	Press the [CAMERA OSD] button for 2 seconds.
Selecting the items	Press the [▲] or [▼] ([◀] or [▶]) button.	Turn the jog dial (main).	Press the [YES] or [NO] button.	Turn the F1 dial.
Displaying the sub-menus	Press the [○] button.	Press the jog dial (main).	Press the [ITEM] button.	Press the F1 dial.

Basic operations (continued)

Camera menu operation	Wireless remote control	Controller		
		AW-RP655	AW-RP555	AW-RP50
Returning to the previous menu	With the cursor at the [Return] position, press the [○] button.	With the cursor at the [Return] position, press the jog dial (main).	With the cursor at the [Return] position, press the [ITEM] button.	With the cursor at the [Return] position, press the F1 dial.
Changing the settings	With the cursor at the item to be changed, press the [○] button to start the item's value blinking. Use the [▲], [▼], [◀] and [▶] buttons to change the value, and press the [○] button to enter the change.	<ol style="list-style-type: none"> 1. Press the jog dial (main) to start the setting blinking. 2. Turn the jog dial (main) to change the setting. 3. Press the jog dial (main) to enter the setting (and stop the blinking). 	<ol style="list-style-type: none"> 1. Press the [ITEM] button to start the setting blinking. 2. Press the [YES] or [NO] button to change the setting. 3. Press the [ITEM] button to enter the setting (and stop the blinking). 	<ol style="list-style-type: none"> 1. Press the F1 dial to start the setting blinking. 2. Turn the F1 dial to change the setting. 3. Press the F1 dial to enter the setting (and stop the blinking).
Canceling the setting change	While the setting is blinking, press the [MENU] button quickly (for less than 2 seconds).	While the setting is blinking, press the jog dial (R).	While the setting is blinking, press the [MENU] button.	—
Exiting the camera menu operations	Press the [MENU] button for 2 seconds.	Press the [MENU] button or [R/B GAIN/PED] button.	Press the [MENU] button for 2 seconds.	Press the [CAMERA OSD] button for 2 seconds.

Notes

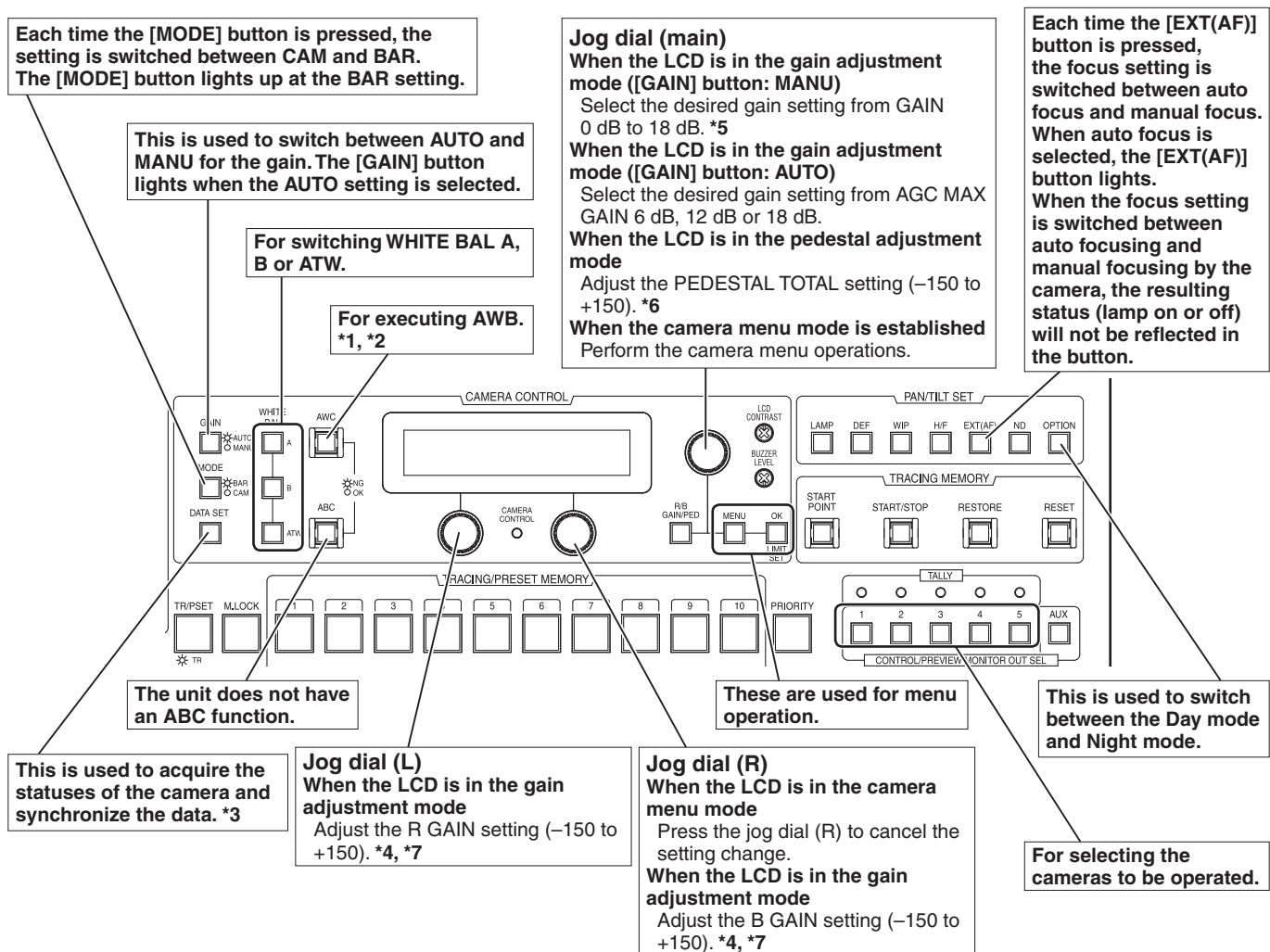
- Perform the menu operations and exit from the menus using the controller which displayed the Top Menu. If a menu operation has been performed or a menu has been exited using another controller, first display the Top Menu and exit from it using one controller, and then display the Top Menu and exit from it using the other controller.
- The unit uses a different method to operate its menus from the one employed by the convertible cameras (except for the AW-HE870) and HD integrated cameras which have already been launched onto the market. For details, refer to the Operating Instructions of the camera concerned.
- The response speed of the camera differs slightly depending on the controller used.

Basic operations (continued)

■ When performing the operations using the wireless remote control

- 1 Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit which is to be operated.**
- 2 Press the [MENU] button for 2 seconds.**
The Top Menu is displayed.
- 3 Press the [▲] or [▼] button to bring the cursor to the item to be selected.**
Each time the [▲] or [▼] button is pressed, the cursor moves.
The cursor can be moved in the same way using the [◀] and [▶] buttons.
- 4 Press the [○] button.**
The sub-menu of the selected item is displayed.
(Some sub-menu items have a sub-menu of their own.)
- 5 Press the [▲] or [▼] button to bring the cursor to the item to be set.**
Each time the [▲] or [▼] button is pressed, the cursor moves.
The cursor can be moved in the same way using the [◀] and [▶] buttons.
With the cursor at the "Return" position, press the [○] button to return to the previous menu.
- 6 Press the [○] button.**
The value of the item to be set starts blinking.
- 7 Press the [▲] or [▼] button to change the setting.**
The setting can be changed in the same way using the [◀] and [▶] buttons.
- 8 Press the [○] button.**
The value of the item to be set is entered, and it stops blinking.
- 9 After the setting has been completed, press the [MENU] button for 2 seconds.**
The camera menu display is exited.

■ Control exercised from the Multi-Function Controller AW-RP655



- *1: The AWC switch indicator blinks while the white balance is being adjusted. When AWB is completed successfully, the lamp goes off; when it is not completed successfully, it lights up.
- *2: The switch lights without AWB being executed when the white balance mode of the main unit is ATW, or when the Color Bar is being displayed.
- *3: SCENE FILE, CAM/BAR, and GAINUP of each SCENE, as well as the W/B MODE statuses are synchronized.
- *4: The R gain and B gain cannot be adjusted if ATW is used as the White Balance Mode setting.

- *5: With this unit, the gain setting is reflected in increments of 3 dB in the control.
- *6: With this unit, the setting is reflected in increments of 15 dB in the control. On the camera menu, the setting is adjusted in range from –10 to +10.
- *7: With this unit, the setting is reflected in increments of 5 dB in the control. On the camera menu, the setting is adjusted in range from –30 to +30.

Basic operations (continued)

● Procedure for camera menu operation (AW-RP655)

1 Press one of the [1] to [5] buttons of [CONTROL/PREVIEW MONITOR OUT SEL] to select the unit which is to be operated.

2 Press the [MENU] button to set the LCD panel display to the menu mode.

3 Turn the jog dial (main) until CAMERA SETTING appears, and press the [OK] button.

CAMERA SETTING
→ OK Key

4 When the scene selection menu has appeared on the LCD panel, select the scene to be set, and press the [OK] button.

SCENE HALOGEN
 → OK Key

The scene names displayed on the LCD panel correlate with the scene files of the AW-HE60 as shown below.

AW-RP655 display	AW-HE60 scene file
HALOGEN	Manual1
FLUORESCENT	Manual2
OUTDOOR	Manual3
USER	FullAuto

5 When the following message appears on the LCD panel, press the [OK] button again.

OPEN CAMERA MENU ?
→ OK Key

The camera menu of the AW-HE60 is displayed on the monitor.

6 Turn the jog dial (main) to select camera menu items of the AW-HE60 and change the data.

Turn the jog dial (main) when the cursor is to be moved up or down or the settings are to be changed. Press it when moving to the menu at the next lower hierarchical level or changing a setting at the very bottom hierarchical level.

7 Press the [MENU] button to exit the camera menu.

Notes

- Genlock is set using the camera menu for the AW-HE60.
- It may be necessary to upgrade the software version in order to operate an AW-HE60 from an AW-RP655. Ask your dealer for details.

Basic operations (continued)

■ Control exercised from the Multi Hybrid Control Panel AW-RP555

Each time the [GAIN] button is pressed, the setting is switched in the sequence of GAIN AUTO → 0dB → L (9dB) → H (18dB), and the mode is displayed by the LEDs as shown below.

[ON: LED lights; OFF: LED off]

	GAIN button	MANU L LED	MANU H LED
AUTO	ON	OFF	OFF
0dB	OFF	OFF	OFF
LOW	OFF	ON	OFF
HIGH	OFF	OFF	ON
Others	OFF	ON	ON

Each time the [MODE] button is pressed, the setting is switched between CAM and BAR. The [MODE] button lights up at the BAR setting.

For selecting the cameras to be operated.

For switching the contrast mode. *3

Shutter mode selection

Each time this button is pressed, one of the shutter modes set by the controller or "shutter OFF" is selected.

The [SHUTTER] button lights up in all modes except shutter OFF.

The shutter mode settings established by the [PRESET] buttons are as follows.

MODE	PRESET No.	MODE	PRESET No.
1/100**1	PRESET1	1/4000	PRESET6
1/120**2		1/10000	PRESET7
1/250	PRESET2	SYNCHRO-SCAN	PRESET8
1/500	PRESET3		
1/1000	PRESET4	ELC	PRESET9
1/2000	PRESET5	OFF	PRESET10

**1: "1/100" when 59.94 Hz is selected as the frequency setting of the AW-HE60.

**2: "1/120" when 50 Hz is selected as the frequency setting of the AW-HE60.

For executing AWB. *1, *2

The unit does not have an ABC function.

For switching the SCENE file (FullAuto, Manual1 to 3).

For operating the camera menus.

MENU: This operates in the same way as MENU on the camera.

ITEM: This operates in the same way as ENTER on the camera.

YES: This operates in the same way as UP on the camera.

NO: This operates in the same way as DOWN on the camera.

This is used to switch between the Day mode and Night mode.

Each time the [(AF)EXT] button is pressed, the focus setting is switched between auto focus and manual focus. When auto focus is selected, the [(AF)EXT] button lights. When the focus setting is switched between auto focusing and manual focusing by the camera, the resulting status (lamp on or off) will not be reflected in the button.

For switching WHITE BAL A, B or ATW. *4

- *1: The lamp of the AWC switch flashes while automatic white balance is being executed. When AWB is completed successfully, the lamp goes off; when it is not completed successfully, it lights up.
- *2: The switch lights without AWB being executed when the white balance mode of the main unit is ATW, or when the Color Bar is being displayed.

- *3: The contrast level can be adjusted in the AUTO mode.
- *4: There is a delay in the switching of the display when the settings are changed on the camera.

Basic operations (continued)

● Procedure for camera menu operation (AW-RP555)

1 Press one of the [1] to [5] buttons of [CONTROL] to select the unit which is to be operated.

2 Press the [MENU] button of the AW-RP555 for 2 seconds.

The camera menu of the AW-HE60 is displayed on the monitor.

3 Perform one of the following steps to select the menu item.

If the [YES] button is pressed, the selection item moves up; if the [NO] button is pressed, it moves down.

4 Press the [ITEM] button.

The value of the item to be set starts blinking.

5 Press the [YES] or [NO] button to change the setting.

6 After deciding on the setting, press the [ITEM] button.

The value of the item to be set is entered, and it stops blinking.

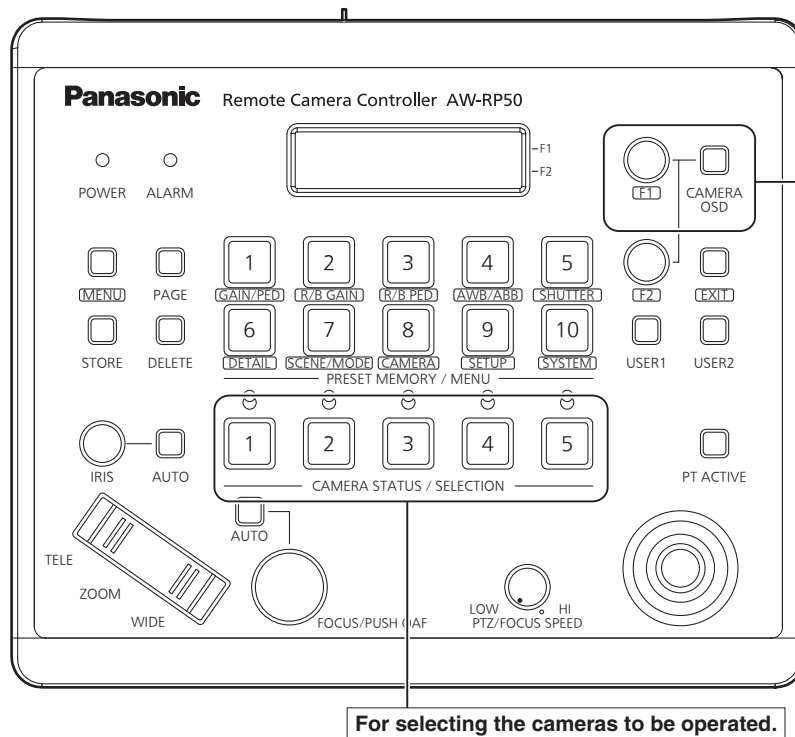
7 Press the [MENU] button for 2 seconds to exit the camera menu.

Note

- It may be necessary to upgrade the software version in order to operate an AW-HE60 from an AW-RP555. Ask your dealer for details.

Basic operations (continued)

■ Control exercised from the Remote Camera Controller AW-RP50



For operating the camera menus.

CAMERA OSD:

When this is pressed for 2 seconds, the selected camera menu is displayed, overlapping the camera output image. When it is pressed for 2 seconds while a camera menu is displayed, the menu is cleared.

F1: Turn F1 to move the cursor up or down on the camera menu or change the setting. Press it when moving to the menu at the next lower hierarchical level or changing a setting at the very bottom hierarchical level.

● Procedure for camera menu operation (AW-RP50)

- 1 Press one of the [CAMERA STATUS/ SELECTION] buttons to select the unit which is to be operated.**
- 2 Press the [CAMERA OSD] button of the AW-RP50 for 2 seconds.**

The camera menu of the AW-HE60 is displayed on the monitor.
- 3 Turn the F1 dial to select the AW-HE60 camera menu item or change the data.**

Turn the F1 dial to move the cursor up or down or change the setting.
Press it to move to the menu at the next lower hierarchical level or change a blinking setting at the very bottom hierarchical level.
- 4 Press the [CAMERA OSD] button for 2 seconds to exit the camera menu.**

Camera menu items

■ Setting the camera menu items

When the unit's settings are to be selected, the camera menus are displayed on the monitor.

The monitor is connected to the video signal output connector.

The basic camera menu operations involve displaying sub-menus from the Top Menu items, and selecting settings on the sub-menus.

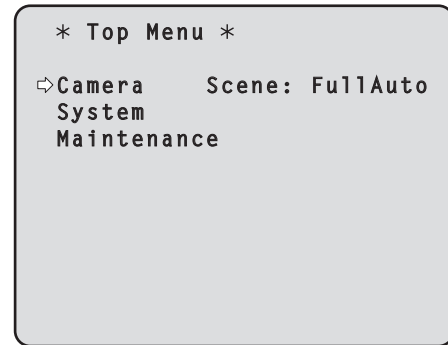
Some sub-menus have menu items for performing more detailed settings.

For details on the basic operations to display the camera menus and change the items using the wireless remote control or controller (AW-RP655, AW-RP555 or AW-RP50), refer to pages 32 to 39.

The “*” and “#” marks in the menu titles indicate the hierarchical level of the menu currently displayed. For instance, “* Top Menu *” indicates the first hierarchical level whereas “** Camera **” and “## System ##” indicate that the second hierarchical level is now displayed.

Menu items accompanied by a “*” mark indicate data which is stored on a scene by scene basis; menu items accompanied by a “#” mark indicate data which is stored together for one camera regardless of the scenes.

■ Top Menu screen



Camera

Select this to open the camera menu relating to the camera images.

System

Select this to display the System menu used to adjust the genlock (external synchronization) phase or establish the camera output image settings.

Maintenance

Display the Maintenance menu which concerns checking the unit's firmware versions, checking the IP address and initialize the settings.

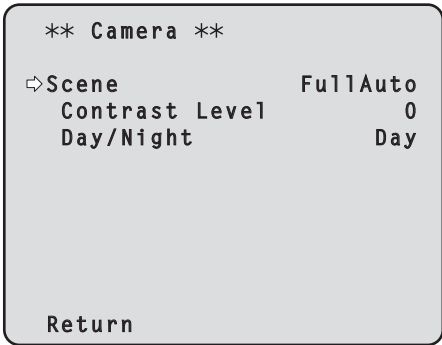
Note

- The Top Menu does not have a “Return” setting. To close the menu screen, use the controller to perform the operation to close the menu screen. For details, refer to pages 32 to 39.

Camera menu items (continued)

■ Camera screen (when FullAuto is selected)

This menu is used for the camera image settings.



Scene

[FullAuto, Manual1, Manual2, Manual3]

Selected here is the shooting mode that matches the shooting situation.

Select the mode which best suits the prevailing shooting conditions and the user's preferences.

FullAuto: In this mode, the optimum settings and adjustments for the shooting conditions at hand are automatically established. When "FullAuto" has been selected, the detailed setting and adjustment menus are not displayed.

Manual1 to 3: In these modes, the detailed settings and adjustments are established manually to match the prevailing shooting conditions and the user's preferences. When the Manual1, Manual2 or Manual3 mode has been selected, the detailed setting and adjustment menu for the mode concerned is displayed.

Contrast Level [-5 to +5]

Use the contrast level to adjust the image brightness.

Day/Night [Day, Night]

This is used to select normal shooting or low light shooting (by exposing the subjects to infrared rays).

Day: Normal shooting

Night: Low light shooting

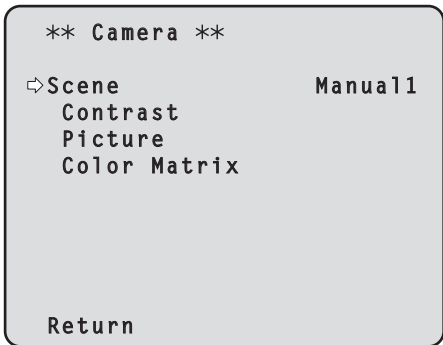
- In Night mode, Black-and-white images are output.

The lens iris is forcibly set to open.

Return

Use this to return to the previous menu.

■ Camera screen (when Manual1 to 3 is selected)



Scene

[FullAuto, Manual1, Manual2, Manual3]

Refer to section on Scene in the column on the left.

Contrast

Select this to display the Contrast screen to adjust the brightness.

Picture

This menu item displays the Picture screen on which to adjust the picture quality.

Two screens (Picture 1/2 and Picture 2/2) are provided for the picture quality adjustment menu.

Color Matrix

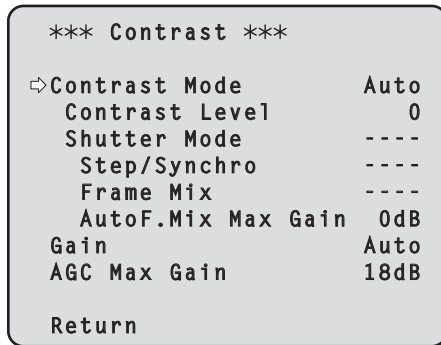
This menu item is used to adjust the 16-axis color matrix.

Return

Use this to return to the previous menu.

Camera menu items (continued)

■ Contrast screen



Contrast Mode [Auto, Manual]

This item is used to select whether the image brightness (contrast) is to be controlled automatically or manually.

Auto: The iris, shutter speed and frame addition are controlled and the camera brightness is adjusted automatically.

Manual: Operations are performed using the manually set values.

Contrast Level [-5 to +5]

Set here is the contrast level when the image brightness is adjusted.

This item can be set when “Auto” has been selected as the “Contrast Mode” setting.

Shutter Mode [Off, Step, Synchro]

Select for camera shutter speed.

This item can be set when “Manual” has been selected as the “Contrast Mode” setting.

Off: The shutter is set to OFF (so that it cannot be tripped).

Step: The step shutter is set (the steps can be changed).

Synchro: The synchro shutter is set (the setting can be changed continuously).

Step/Synchro

This is used to adjust the shutter speed in the mode which was selected as the “Shutter Mode” setting.

When a higher shutter speed is selected, fast-moving subjects do not become blurred easily but the images will be darker.

The shutter speeds that can be set are listed below.

[When 59.94 Hz has been set as the unit's frequency]

When “Step” is selected as the “Shutter Mode”	When “Synchro” is selected as the “Shutter Mode”
1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	60.24 Hz to max. 646.21 Hz (255 steps)

[When 50 Hz has been set as the unit's frequency]

When “Step” is selected as the “Shutter Mode”	When “Synchro” is selected as the “Shutter Mode”
1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	50.20 Hz to max. 538.51 Hz (255 steps)

Frame Mix [Auto, Off, 6dB, 12dB, 18dB]

Select for frame addition (gain-up using sensor storage) amount.

This item can be set when “Off” is selected as the “Shutter Mode” item setting.

When frame addition is performed, it will appear as if the images are missing some frames.

AutoF. Mix Max Gain

[0dB, 6dB, 12dB, 18dB]

When “Auto” for the “Contrast Mode” or “Auto” for the “Frame Mix” is selected, the maximum frame addition amount can be set.

If frame addition is performed at the Auto setting, it will appear as if the images are missing some frames.

Gain [Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB]

The image gain is adjusted here.

In locations which are too dark, adjust the gain upward; conversely, in locations which are too bright, adjust it downward.

When “Auto” is set, the light quantity is adjusted automatically.

The noise increases when the gain is increased.

AGC Max Gain [6dB, 12dB, 18dB]

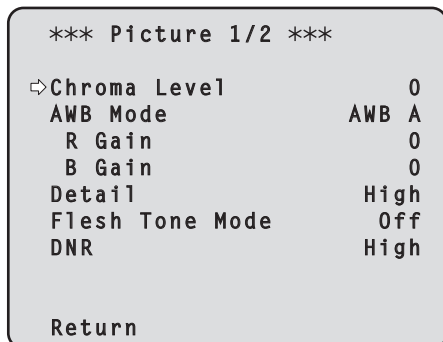
When “Auto” is selected as the “Gain” setting, the maximum gain-up amount can be set.

Return

Use this to return to the previous menu.

Camera menu items (continued)

Picture 1/2 screen



Chroma Level [–3 to +3]

Set here is the color intensity (chroma level) of the images.

AWB Mode [ATW, AWB A, AWB B]

The white balance mode is selected here. Select the mode when the coloring is not natural because of the nature of the light source or other factors. If the white color serving as the reference can be recognized, subjects can be shot with natural coloring.

ATW: In this mode, the white balance is compensated for automatically, even if changes occur in the light source or color temperature, by a process of continuous and automatic adjustment.

AWB A, AWB B:

When AWB A or AWB B is selected and the white balance is executed, the adjustment results obtained are stored in the memory selected. When AWB A or AWB B is then selected, the white balance stored in the selected memory can be recalled.

Note

- When preset settings have been called from the AW-RP655, the AWB mode which was set when the preset data was registered by the AW-RP655 will be called.

R Gain, B Gain [–30 to +30]

When “AWB A” or “AWB B” is selected as the AWB Mode setting, the white balance can be finely adjusted after automatic white balance (AWB) has been performed.

Notes

- When automatic white balance (AWB) is executed, the R Gain and B Gain values are returned to “0”.
- When “AWB A” or “AWB B” is selected as the AWB Mode setting, the R Gain and B Gain adjustment values can be stored in the two memories, A and B.
- When new values are set, the previous values are erased. Use each of the memories for a different purpose in accordance with the shooting conditions.
- In terms of registering values in the preset memories, the R Gain and B Gain settings (–30 to +30) are not stored, but the white balance (color) status after adjustments have been made using the R Gain and B Gain items can be stored.
- If settings in the preset memories are recalled when “Mode A” has been selected as the Preset Scope setting, the R Gain and B Gain settings are returned to “0”.
- When “ATW” has been selected as the AWB Mode setting, the R Gain and B Gain cannot be adjusted.

Detail [Off, Low, High]

The image detail (image sharpness) is adjusted here. When “Low” or “High” is selected, the detail is enhanced.

Flesh Tone Mode [Off, Low, High]

Set here is the flesh tone mode for displaying the subjects’ skin so that it appears more smoothly and eye-pleasingly. When “Low” or “High” is selected, the effect is enhanced.

DNR [Off, Low, High]

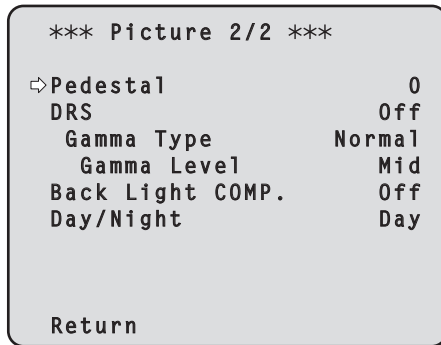
Set here is the level of the digital noise reduction effect so that light, noise-free and clear images will be output even at night and in other low-brightness environments. When “Low” or “High” is selected, noise can be eliminated. However, there is an increased possibility that afterimages may occur.

Return

Use this to return to the previous menu.

Camera menu items (continued)

■ Picture 2/2 screen



Day/Night [Day, Night]

This is used to select normal shooting or low light shooting (by exposing the subjects to infrared rays).

Day: Normal shooting

Night: Low light shooting

- In Night mode, Black-and-white images are output.

The lens iris is forcibly set to open.

Return

Use this to return to the previous menu.

Pedestal [–10 to +10]

This item is used to adjust the black level (adjust the pedestal) so that the dark parts of the images are easier to see.

These parts become darker when a negative setting is selected and, conversely, lighter when a positive setting is selected.

DRS [Off, Low, High]

Set here is the DRS function which provides just the right amount of compensation when images with significant light/dark differences are displayed.

When “Low” or “High” is selected, the effect is enhanced even more.

This may make noise more perceptible with some scenes.

Gamma Type [Off, Normal, Cinema]

Selected here is the type of gamma curve.

The selected setting takes effect when “Off” is selected as the “DRS” item setting.

Normally, the “Normal” setting is used.

When “Cinema” is selected, images giving off an atmosphere like movies can be shot.

Gamma Level [Low, Mid, High]

This item is used to adjust the gamma compensation level.

The item’s setting takes effect when “Off” has been selected as the “DRS” setting and “Normal” as the “Gamma Type” setting.

When “Low” is set, the images appear sedate and composed. The resulting gamma curve has a gentle gradient in the low-brightness areas, and the contrast is sharper.

Conversely, when “High” is set, the tonal range in the dark area is expanded so that the images take on a lighter tone. The resulting gamma curve has a sharp gradient in the low-brightness areas, and the contrast is softer.

Back Light COMP. [Off, On]

“On” or “Off” is set here for the backlight compensation function.

Under backlight conditions, the function prevents darkening as a result of light striking the backs of subjects, and makes it possible to shoot images in shade or shadow more brightly.

The function takes effect when “Auto” has been selected as the Contrast Mode, Gain or Frame Mix item setting.

Camera menu items (continued)

16-axis color matrix

(These operations can be performed only when Manual1 to 3 has been selected as the Scene setting.)

<Color Matrix 1/3 screen>

*** Color Matrix 1/3 ***

Matrix Select

Normal

[Saturation]

[Phase]

Axis01

Axis02

Axis03

Axis04

Axis05

Axis06

Return

<Color Matrix 2/3 screen>

*** Color Matrix 2/3 ***

Matrix Select

Normal

[Saturation]

[Phase]

Axis07

Axis08

Axis09

Axis10

Axis11

Axis12

Return

<Color Matrix 3/3 screen>

*** Color Matrix 3/3 ***

Matrix Select

Normal

[Saturation]

[Phase]

Axis13

Axis14

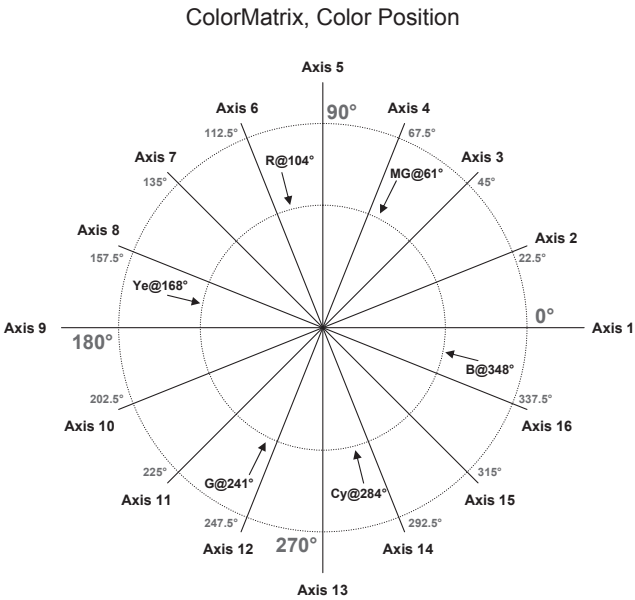
Axis15

Axis16

Return

Matrix Select [Normal, EBU, NTSC, User]

The preset color matrix data is loaded, and the saturation and phase are compensated accordingly. When “User” is selected, the saturation and phase can be finely adjusted using the 16-axis color matrix (Axis 01 to Axis 16).



Axis 01 to Axis 16: Saturation [–127 to +127]

The saturation of Axis 01 to Axis 16 can be finely adjusted.

Axis 01 to Axis 16: Phase [–127 to +127]

The phase of Axis 01 to Axis 16 can be finely adjusted.

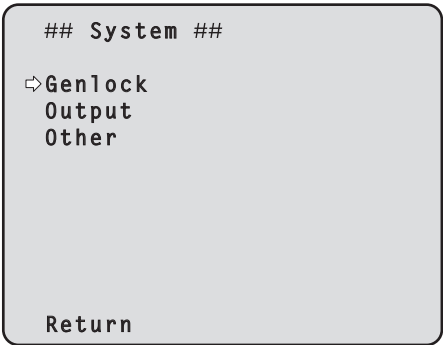
Return

Use this to return to the previous menu.

Camera menu items (continued)

■ System screen

This menu has items that relate to the genlock phase adjustment and camera's output image settings.



Genlock (AW-HE60S only)

This displays the Genlock screen on which to perform the phase adjustments.
With the AW-HE60H, this item cannot be selected.

Output

This displays the Output screen on which to select the camera's output image settings.

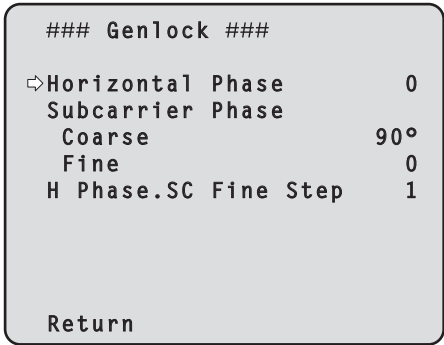
Other

This displays the Other screen on which to select the settings for the installation status of the camera's pan-tilt head unit and operating speed as well as the settings relating to the other functions.

Return

Use this to return to the previous menu.

■ Genlock screen (AW-HE60S only)



Horizontal Phase [−206 to +49]

This is used to adjust the horizontal phase during genlock.

Subcarrier Phase Coarse [0° to 315°]

This is used to adjust coarsely the color phase during genlock.

This setting is valid for the VBS signal output.

Subcarrier Phase Fine [−127 to +127]

This is used to adjust finely the color phase during genlock.

This setting is valid for the VBS signal output.

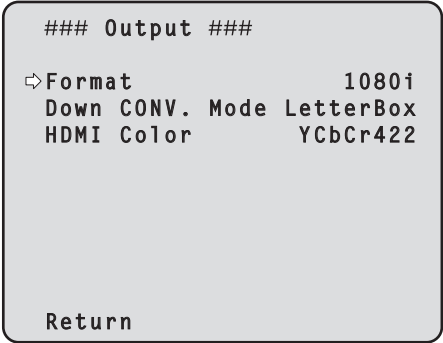
H Phase. SC Fine Step [1 to 10]

This is used to select the amount by which the horizontal phase (Horizontal Phase) is to be adjusted and by which the color phase (Subcarrier Phase Fine) is to be adjusted finely.

Return

Use this to return to the previous menu.

Output screen

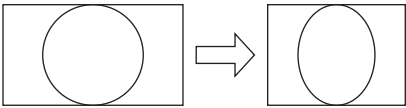
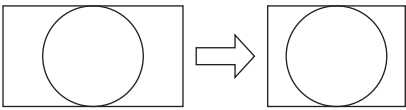
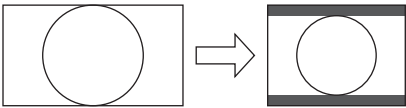


Format
[1080/59.94p, 1080/59.94i, 720/59.94p, 480/59.94p, 480/59.94i, 1080/29.97PsF, 1080/50p, 1080/50i, 720/50p, 576/50p, 576/50i, 1080/25PsF]

The video format is changed on this screen.
The formats of the images which can be output differ between the AW-HE60H and AW-HE60S.
For details on how to change the format, refer to “Changing the format” (page 48).

Down CONV. Mode
[Squeeze, SideCut, LetterBox]

The down-conversion mode is selected here.

Squeeze	When the 4:3 aspect ratio has been set for the monitor screen, the images are squeezed horizontally and extended vertically changing the view of the angle. 
SideCut	With the vertical height serving as the reference, the parts which extend beyond this at the two sides are cropped changing the view of the angle. 
LetterBox	With the horizontal width serving as the reference, black bands are added at the top and bottom changing the view of the angle. 

- When output is selected for the color bar, the mode is fixed to Squeeze.
If “SideCut” or “LetterBox” has been selected, the images will not appear for a few seconds when the color bar display is set to ON or OFF.

HDMI Color (AW-HE60H only)
[RGB-NOR, RGB-ENH, YCbCr422, YCbCr444]

Set here is the HDMI color output.

- When an HDMI monitor is used, use “YCbCr422” under normal circumstances.
- In cases where, for instance, HDMI (RGB) signals are converted and output to a DVI monitor, the settings required will differ depending on the color gradation supported by the monitor.

RGB-NOR	The RGB output signals are output in the 16 to 235 range.
RGB-ENH	The RGB output signals are output in the 0 to 255 range.

- If the black parts of the images appear overexposed when “RGB-NOR” has been selected, use the “RGB-ENH” setting instead.
- Conversely, if the images are displayed with a loss of dark detail when “RGB-ENH” has been selected, use the “RGB-NOR” setting instead.

Note

- If an HDMI Color setting which is not supported by the monitor has been specified, the HDMI Color setting may be changed automatically.
(The menu display will remain unchanged.)

With the AW-HE60S, this item cannot be selected.

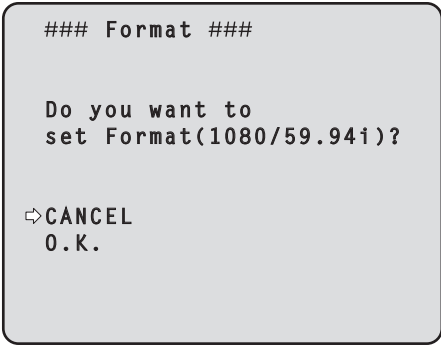
Return
Use this to return to the previous menu.

Camera menu items (continued)

●Changing the format

When the format is changed on the Output screen from its current setting, the Format change check screen appears.

Format change check screen

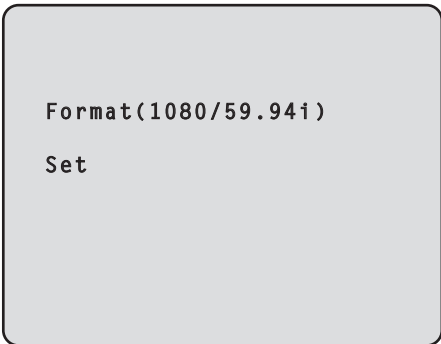


- The format to be set is displayed within the parentheses on the screen.

Field frequency	59.94 Hz	50 Hz
When using the AW-HE60H	1080/59.94p,	1080/50p,
	1080/59.94i,	1080/50i,
	720/59.94p,	720/50p,
	480/59.94p,	576/50p,
	480/59.94i,	576/50i,
	1080/29.97PsF	1080/25PsF
When using the AW-HE60S	1080/59.94i,	1080/50i,
	720/59.94p,	720/50p,
	480/59.94i,	576/50i,
	1080/29.97PsF	1080/25PsF

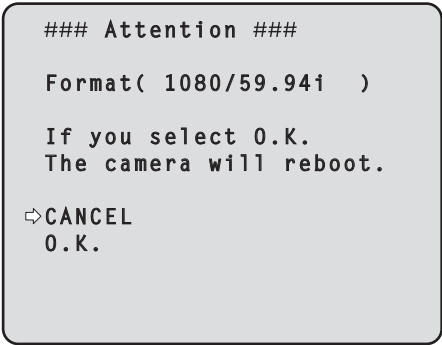
- When the cursor is moved to “O.K.” on the format change check screen and the setting is entered, the Format Set screen appears for a few seconds, and the format is changed.
After the format has been changed, the display returns to the Output screen.
With some types of monitors, the Format Set screen may not be displayed.

Format Set screen



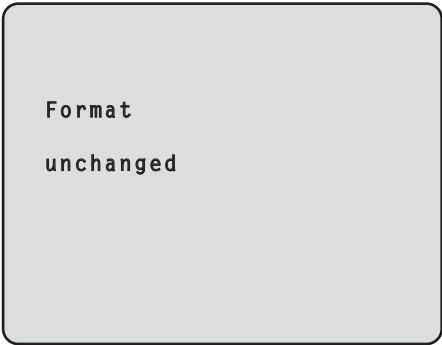
- The format to be set is displayed within the parentheses on the screen.
- When the cursor is moved to “CANCEL” on the format change check screen and the setting is entered, the Format unchanged screen appears for 5 seconds, the format is left unchanged, and the display returns to the Output screen.

Attention screen



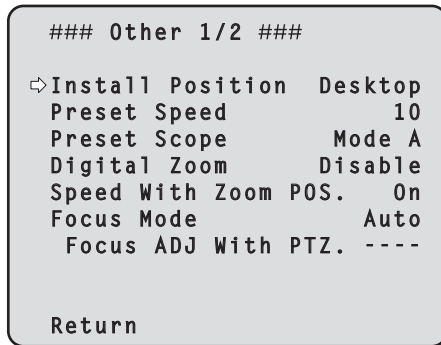
- The Attention screen is displayed in the following cases:
 - In the IP mode
 - When a change is made from the 480/59.94i(59.94 Hz) or 576/50i(50 Hz) format to any other format
 - When a change is made from a format other than 480/59.94i (59.94 Hz) or 576/50i (50 Hz) format to the 480/59.94i (59.94 Hz) or 576/50i (50 Hz) format
- When the cursor is moved to [O.K.] on the Attention screen and clicked, the unit is automatically rebooted, and the format is changed.
- When the cursor is moved to “CANCEL” on the Attention screen and the setting is entered, the Format unchanged screen appears for 5 seconds, the format is left unchanged, and the display returns to the Output screen.

Format unchanged screen



Camera menu items (continued)

■ Other 1/2 screen



Install Position [Desktop, Hanging]

“Desktop” or “Hanging” is selected here as the method used to install the unit.

Desktop: Stand-alone installation

Hanging: Suspended installation

- When “Hanging” has been selected, the top, bottom, left and right of the images will be reversed, and up/down/left/right control for panning and tilting will also be reversed.

Preset Speed [1 to 30]

There are 30 preset pan-tilt operation speeds when regenerating the camera direction and other information which are registered in the preset memory.

Notes

- If a high value is selected for the Preset Speed setting, the image on the screen may shake when operation stops.
- When connecting the unit to the AW-RP655 for use, the “DIAGONAL SPEED (P/T SETTING)” setting of the AW-RP655 takes effect.
To change the Preset Speed, change the AW-RP655 setting.

Preset Scope [Mode A, Mode B, Mode C]

Selected here are the setting items to be recalled when the contents of the preset memory are regenerated.

Mode A: Pan, Tilt, Zoom (including digital zoom), Focus, Iris, Gain, White-BAL

Mode B: Pan, Tilt, Zoom (including digital zoom), Focus, Iris

Mode C: Pan, Tilt, Zoom (including digital zoom), Focus

Digital Zoom [Disable, Enable]

“Enable” or “Disable” is set here for the digital zoom function.

If zooming is performed toward the Tele end beyond the maximum position when “Enable” has been selected, the digital zoom can be operated continuously. Zooming will stop temporarily at the position where the optical zoom and digital zoom are switched so after it has stopped at this position, proceed with zooming again.

When the setting is changed to “Disable” while already in the digital zoom region, the zoom will automatically move to the maximum position of the optical zoom.

Note

- The digital zoom is set to off when color bars are displayed during digital zooming.

Speed With Zoom POS. [Off, On]

“Off” or “On” is set here for the function used to adjust the camera direction’s adjustment speed in conjunction with the zoom magnification.

When “On” is set, the panning and tilting operations will become slower in the zoom status.

This function has no effect during preset operations.

Focus Mode [Auto, Manual]

“Auto” or “Manual” is set here for the focusing function.

Auto: The subjects are always brought into focus automatically.

Manual: The focus is operated manually.

Focus ADJ With PTZ. [Off, On]

“Off” or “On” is set here for the function which compensates for out-of-focusing when it occurs during panning, tilting or zooming operations at the manual focus setting.

When “Off” is set, adjust the focus as required after zooming or set the focus to the auto mode.

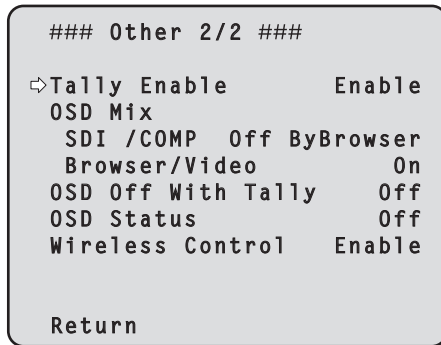
This item can be selected only when “Manual” has been selected as the “Focus Mode” setting.

Return

Use this to return to the previous menu.

Camera menu items (continued)

■ Other 2/2 screen



Tally Enable [Disable, Enable]

“Enable” or “Disable” is set here for the function which turns on or turns off the tally lamp using the tally control signal.

OSD Mix

Whether the camera menus, statuses and other displays are to be turned Off or On can be selected here for each output picture.

SDI(HDMI)/COMP [Off, On, Off ByBrowser]

Browser/Video [Off, On]

Off: The camera menus and statuses are not displayed on the output pictures targeted by the setting items listed above.

On: The camera menus and statuses are displayed for the output pictures covered by the setting items listed above.

Off ByBrowser:

If a menu has been opened from the browser screen, the camera menus and statuses are not displayed on the output images for which this setting is established.

Note

- Even if the display has been set to the off position the camera menus will still be displayed for one minute whenever the power of the unit is turned on.

OSD Off With Tally [Off, On]

This is used to enable or disable the function for clearing the OSD menu displays when the tally signal is received by a command or contact.

When the tally signal is released, the original OSD menu displays are restored.

OSD Status [Off, On]

“Off” or “On” is set here for the status display which appears during AWB operations.

Wireless Control [Disable, Enable]

“Enable” or “Disable” is set here for operations conducted from the wireless remote control.

The operations are enabled when the unit's power is turned on from an external device other than a wireless remote control, and they are disabled when the power is turned on from a wireless remote control.

Notes

- At the point when this item's setting is changed, the new setting is not reflected in operation. It is reflected when the unit is set to the standby mode and its power is turned on.
- Follow one of the procedures below if the item's setting is changed by mistake and the unit can no longer be operated from a wireless remote control.

When menu operations can be performed using another control device:

- First change the item using a control device capable of performing menu operations, and then turn off the unit's power and turn it back on.

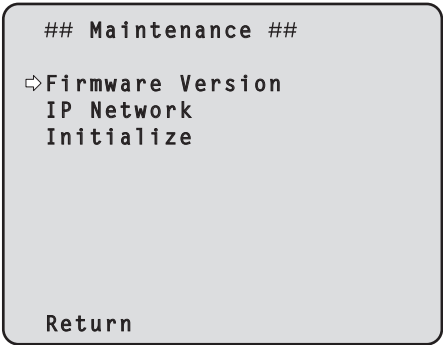
When menu operations cannot be performed using other control devices:

1. Turn off the power of the units and devices that are connected.
2. Disconnect the unit's power cable, and plug it back in.
3. Perform the operation for turning on the unit's power from the wireless remote control.
4. After changing this item, turn off the unit's power and turn it back on.

Return

Use this to return to the previous menu.

■ Maintenance screen



Firmware Version

This is selected to display the Firmware Version screen on which to check the version of the firmware used.

IP Network

This is selected to display the IP Network screen on which the user can check the IP Address, Subnet Mask and Default Gateway settings which have been established in the unit.

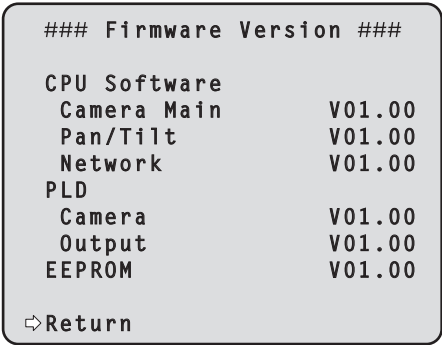
Initialize

This is selected to display the Initialize screen on which the user can initialize the camera settings.
For details on operation, refer to “Concerning initialization” on page 52.

Return

Use this to return to the previous menu.

■ Firmware Version screen



CPU Software Camera Main

This is selected to display the software version of the camera unit.

CPU Software Pan/Tilt

This is selected to display the software version of the pan-tilt unit.

CPU Software Network

This is selected to display the software version of the network unit.

PLD Camera

This is selected to display the PLD version of the camera unit.

PLD Output

This is selected to display the PLD version of the output unit.

EEPROM

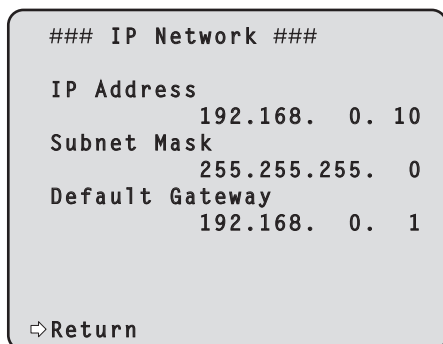
This is selected to display the EEPROM version.

Return

Use this to return to the previous menu.

Camera menu items (continued)

■ IP Network screen



IP Address

This is selected to display the IP address which has been set for the unit.

Subnet Mask

This is selected to display the subnet mask which has been set for the unit.

Default Gateway

This is selected to display the default gateway which has been set for the unit.

Note

- On this screen, the IP Address, Subnet Mask and Default Gateway settings can be displayed but they cannot be changed.
To change an address, use "Network" (page 88) on the Web setting screen or "Easy IP Setup Software" (page 41) in the <Basics>.

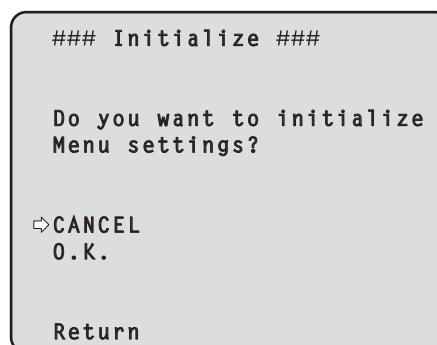
Return

Use this to return to the previous menu.

● Concerning initialization

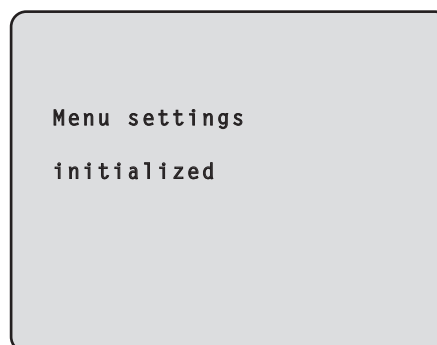
When "Initialize" is selected on the Maintenance screen, the Initialize screen appears.

Initialize screen



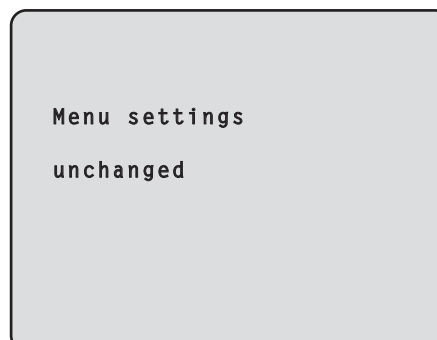
- When the cursor is moved to "O.K." on the Initialize screen and the setting is entered, the Menu settings initialize screen is displayed for 5 seconds, and the camera settings are restored to the settings which were established when the camera was purchased ("Camera menu item table" (pages 53 to 54)). However, the Format settings (page 47) and Maintenance settings (page 51) are not initialized. When the initialization operation is completed, the Initialize screen is restored to the display.

Menu settings initialized screen



- When the cursor is moved to "CANCEL" on the Initialize screen and the setting is entered, the Menu settings unchanged screen is displayed for 5 seconds, the initialization operation is not performed, and the Initialize screen returns to the display.

Menu settings unchanged screen



Camera menu item table

Menu			Item	Factory setting		Selection items
				FullAuto	Manual1 to 3	
Top Menu	Camera	Scene	Scene	FullAuto	FullAuto	FullAuto, Manual1, Manual2, Manual3
			Contrast	Contrast Mode	Auto	Auto, Manual
				Contrast Level	0	−5 to +5
				Day/Night	Day	Day, Night
				Shutter Mode	----	Off, Step, Synchro
				Step/Synchro (When “Step” is selected as the “Shutter Mode”)	----	<ul style="list-style-type: none"> When 59.94 Hz is selected: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 When 50 Hz is selected: 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
				Step/Synchro (When “Synchro” is selected as the “Shutter Mode”)	----	<ul style="list-style-type: none"> When 59.94 Hz is selected: 60.24Hz to 646.21Hz (1 to 255step) When 50 Hz is selected: 50.20Hz to 538.51Hz (1 to 255step)
				Frame Mix	----	Auto, Off, 6dB, 12dB, 18dB
				AutoF.Mix Max Gain	----	0dB, 6dB, 12dB, 18dB
				Gain	----	Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB
				AGC Max Gain	----	18dB, 6dB, 12dB, 18dB
		Picture	Picture 1/2	Chroma Level	----	−3 to +3
				AWB Mode	----	ATW, AWB A, AWB B
				R Gain	----	−30 to +30
				B Gain	----	−30 to +30
				Detail	----	Off, Low, High
				Flesh Tone Mode	----	Off, Low, High
				DNR	----	Off, Low, High
			Picture 2/2	Pedestal	----	−10 to +10
				DRS	----	Off, Low, High
				Gamma Type	----	Off, Normal, Cinema
				Gamma Level	----	Low, Mid, High
				Back Light COMP.	----	Off, On
				Day/Night	Day	Day, Night
			Color Matrix 1/3	Matrix Select	----	Normal, EBU, NTSC, User
				Axis 01 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 02 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 03 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 04 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 05 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 06 Saturation	----	−127 to +127
				Phase	----	−127 to +127
			Color Matrix 2/3	Matrix Select	----	Normal, EBU, NTSC, User
				Axis 07 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 08 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 09 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 10 Saturation	----	−127 to +127
				Phase	----	−127 to +127
				Axis 11 Saturation	----	−127 to +127
				Phase	----	−127 to +127

Camera menu item table (continued)

Menu					Item	Factory setting		Selection items			
						FullAuto	Manual1 to 3				
Top Menu	Camera	Scene	Picture	Color Matrix 2/3	Axis 12 Saturation	----	0	–127 to +127			
					Phase	----	0	–127 to +127			
				Color Matrix 3/3	Matrix Select	----	EBU	Normal, EBU, NTSC, User			
					Axis 13 Saturation	----	0	–127 to +127			
					Phase	----	0	–127 to +127			
					Axis 14 Saturation	----	0	–127 to +127			
					Phase	----	0	–127 to +127			
					Axis 15 Saturation	----	0	–127 to +127			
					Phase	----	0	–127 to +127			
					Axis 16 Saturation	----	0	–127 to +127			
					Phase	----	0	–127 to +127			
	System	Genlock (AW-HE60S only)			Horizontal Phase	0		–206 to +49			
					Subcarrier Phase						
					Coarse	90°		0° to 315°			
					Fine	0		–127 to +127			
					H Phase.SC Fine Step	1		1 to 10			
		Output			Format	1080/59.94i (When 59.94 Hz is selected)		[AW-HE60H] 1080/59.94p, 1080/59.94i, 720/59.94p, 480/59.94p, 480/59.94i, 1080/29.97PsF			
						1080/50i (When 50 Hz is selected)		[AW-HE60H] 1080/50p, 1080/50i, 720/50p, 576/50p, 576/50i, 1080/25PsF			
								[AW-HE60S] 1080/59.94i, 720/59.94p, 480/59.94i, 1080/29.97PsF			
								[AW-HE60S] 1080/50i, 720/50p, 576/50i, 1080/25PsF			
					Down CONV. Mode	LetterBox		Squeeze, SideCut, LetterBox			
					HDMI Color (AW-HE60H only)	YCbCr422		RGB-NOR, RGB-ENH, YCbCr422, YCbCr444			
					Other	Other 1/2		Install Position	Desktop		Desktop, Hanging
								Preset Speed	10		1 to 30
								Preset Scope	Mode A		Mode A, Mode B, Mode C
								Digital Zoom	Disable		Disable, Enable
		Speed With Zoom POS.	On					Off, On			
		Focus Mode	Auto					Auto, Manual			
		Focus ADJ With PTZ.	----					Off, On			
		Other 2/2		Tally Enable				Enable		Disable, Enable	
				OSD Mix							
				SDI(HDMI) /COMP				Off ByBrowser		Off, On, Off ByBrowser	
				Browser/Video		On		Off, On			
				OSD Off With Tally		Off		Off, On			
				OSD Status		Off		Off, On			
				Wireless Control		Enable		Disable, Enable			
		Maintenance	Firmware Version			CPU Software					
						Camera Main	Version shipped	----			
						Pan/Tilt	Version shipped	----			
					Network	Version shipped	----				
					PLD						
					Camera	Version shipped	----				
					Output	Version shipped	----				
					EEPROM	Version shipped	----				
			IP Network		IP Address	192.168.0.10	----				
	Subnet Mask				255.255.255.0	----					
	Default Gateway	192.168.0.1			----						
Initialize		----	CANCEL		CANCEL, OK						

Controls and settings from web screen

With a personal computer connected to the unit, it is possible to view the camera's IP videos or select various settings from the web browser screen.

The LAN crossover cable is used when connecting a personal computer directly to the unit's LAN connector for IP control, and the LAN straight cable is used when making the connection through a switching hub.

Select an IP address for the personal computer within the private address range while ensuring that it is different from the address of the unit.

Set the subnet mask to the same address as the unit.

Notes

- If you need to change the IP address and subnet mask, be sure to ask your dealer to make these changes for you.

Unit's IP address and subnet mask (factory settings)

IP address: 192.168.0.10

Subnet mask: 255.255.255.0

Range of private addresses:

192.168.0.0 to 192.168.0.255

- If the controller and web browser are being used at the same time, the content selected using the controller may not be reflected on the web browser display. When using both the controller and web browser, be absolutely sure to check the settings using the controller or camera menu.

For details of the required personal computer environment, refer to page 4.

Memo

- Some functions on the web setting screen can be used only from a personal computer which is running Windows. (They cannot be used from a personal computer which is running Mac OS X.)
Functions which can be used by Windows only are indicated using the **Windows** mark.
- The "Network Camera View4" plug-in viewer software must have already been installed in order to display the unit's IP videos using a personal computer which is running Windows.
(This is not required for a personal computer which is running MAC OS X.)
For further details, refer to "Plug-in viewer software (Network Camera View4)" (page 41 in the <Basics>).

Controls and settings from web screen (continued)

■ Displaying the web screen using a personal computer

The procedure is explained here using Windows screens (Internet Explorer), but it is the same when using the Mac (Safari)* screens.

*: There may be differences in some parts of the screen displays.

1 Start the web browser of the personal computer.

Use one of the web browsers below depending on the operating system installed in the personal computer.

Operating system installed	Web browser
Windows	Internet Explorer
Mac OS X	Safari

2 Input "http://192.168.0.10/" in the [Address] box of the web browser.

If the IP address has been changed, input "http://changed IP address/" instead.

If "HTTP port" (page 89) has been changed from its initial setting of "80", input "http://camera's IP address: port number".

Example: If the HTTP port number has been set to "8080":

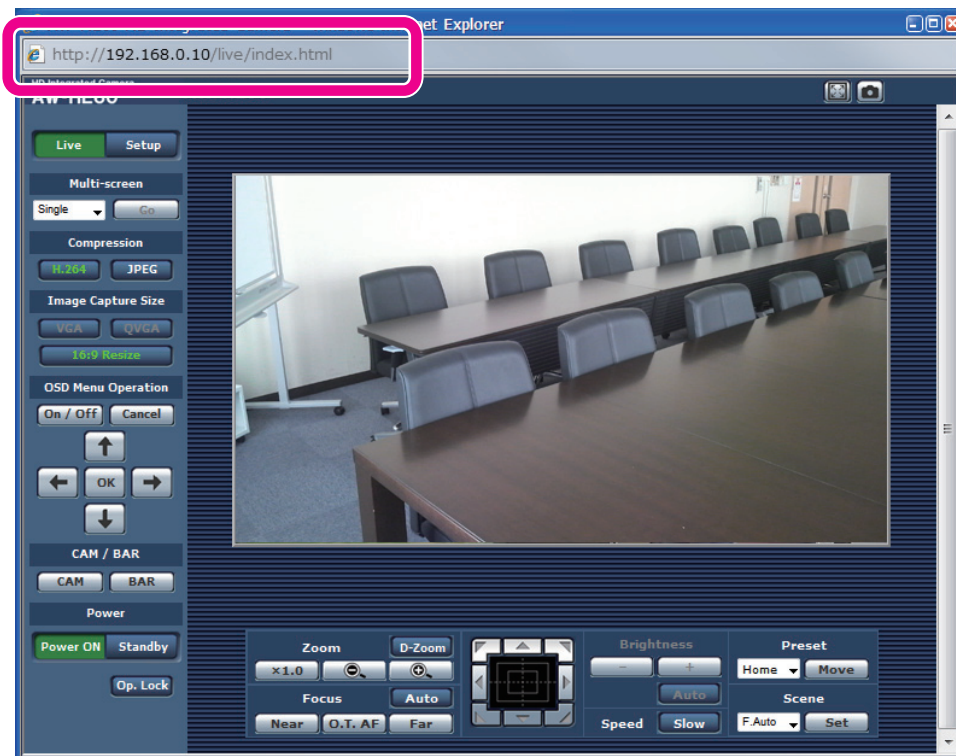
→ http://192.168.0.10:8080/

3 Press the [Enter] key.

A Live screen is displayed.

The Live screen has two modes: the single display mode in which the IP videos of one camera are displayed on one screen, and the multi display mode in which the IP videos of a multiple number of cameras are displayed on one screen.

For details on the single display mode, refer to page 58; for details on the multi display mode, refer to page 63.



Controls and settings from web screen (continued)

Notes

- If the personal computer does not have the plug-in viewer software already installed, an installation confirmation message is displayed before the Live screen is displayed. [Windows](#)
In a case like this, follow the on-screen instructions to install the software.
For further details, refer to “Plug-in viewer software (Network Camera View4)” (page 41 in the <Basics>).
- If “On” has been selected as the “User auth.” (page 84), a screen on which to input the user name and password appears before the Live screen is displayed. The initial settings for the user name and password are given below.

User name	admin
Password	12345

Memo

- While the initial settings remain used for the user name and password, a message prompting the user to change the user name and password is displayed after authorization.
In order to ensure security, the password for the user name of “admin” must be changed without fail.
It is also recommended that the password be changed at regular intervals.
 - When an attempt is made to display multiple H.264 images on one personal computer, IP videos may not be displayed depending on the performance of the personal computer concerned. [Windows](#)
-

Controls and settings from web screen (continued)

■ Live screen: Single display mode

When the **Live** button is pressed, the display switches to the live screen on which the camera images are displayed and the camera's panning, tilting, zooming, focusing and other functions can be controlled.



- **Multi-Screen list box (Multi-screen)**

The live screen display method is selected here.

Single	The IP videos of the connected camera are displayed.
4Split 1/4	When the cameras for multi-screen display have been set ahead of time using the multi-screen setting (page 83), it is possible to view a multiple number of IP videos on a single screen. (Multi display mode)
4Split 2/4	
4Split 3/4	
4Split 4/4	
16 Split	
Go	This displays the IP videos in the mode which was set in the list box.

- **Image Capture Size button (Image Capture Size)**

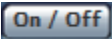
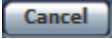








VGA	The IP video in the main area is displayed in the VGA size. This button is enabled only when JPEG images are displayed.
QVGA	The IP video in the main area is displayed in the QVGA size. This button is enabled only when JPEG images are displayed.
16:9 Resize	The IP video in the main area is displayed in the 16:9 size.

- **Compression button (Compression)**

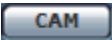
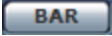
H.264	H.264 images are displayed. Windows The [H.264] button is enabled when the "H.264 transmission" setting of "H.264 image settings" on the Video over IP (image setting) screen is "On". (see page 67)
JPEG	JPEG images are displayed.

Controls and settings from web screen (continued)

• OSD Menu Operation

	Use this to select whether the camera's on-screen displays are to be shown.
	It cancels the selection of the setting which is being changed. It restores the pre-change setting.
	Use these to perform the menu operations. The items are selected using the  ,  ,  and  buttons. If a selected item has a sub menu, this sub menu is displayed by pressing the  button. When the cursor is moved to any item on the bottom-level setting screen and the  button is pressed, the setting of the selected item starts flashing. A setting for a regular menu item is reflected immediately if it is changed while it is still flashing. However, there are a number of menu items (Scene, Format and Initialize) whose setting is reflected only after the  button has been pressed, causing the setting to stop flashing and the new setting to be entered.

• Camera button / Color bar button (CAM/BAR)

	Use this to output the camera pictures.
	Use this to output the color bar signals.

• Power ON button / Standby button



The unit's power is turned on when the Power ON button is pressed.

When the Standby button is pressed, the unit is set to the standby mode.

While the standby mode is established, the control over the camera's operations exercised on the Control screen, the Image button and Maintenance button on the Setup screen is disabled.

Notes

- If Power ON or Standby is selected too quickly, the status selected and the display shown may not correspond.
In a case like this, follow the steps below to restore the correct status display:

[When using Windows]

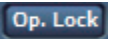
Press the [F5] key on the keyboard of the personal computer.

[When using Mac OS X]

Press the [Command] + [R] keys on the keyboard of the personal computer.

- When operation is transferred to the STANDBY mode: The current zoom, focus and iris positions are stored in the memory (POWER ON preset).
- When operation is transferred to the POWER ON mode: The zoom, focus and iris are transferred to the positions which were stored in the memory (POWER ON preset) when operation was transferred to the STANDBY mode.

• Operation lock button (Op.Lock)

	Use this to lock the operation of the pan, tilt, zoom, focus, brightness, speed, preset and scene operations on the control screen. Use this also to lock the on-screen display menu operations, CAM/BAR and Power ON button/Standby button to prevent operations from being performed by accident.
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Controls and settings from web screen (continued)

• Main area (IP video display area)



The IP video of the connected camera will be displayed. While the tally lamp is on, the area frame will turn red. When the tally lamp is off, the display area will return to normal.

The camera image can be zoomed in and out by operating the mouse wheel inside the display area. [Windows](#)
When the image is zoomed in, click within the display area at the desired new center position for the angle of view, then the camera image will appear centered around that position. [Windows](#)

Memo

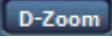
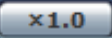


- When the shooting scenes vary significantly, restrictions imposed by the graphics processing (GDI) of the operating system installed may give rise to a phenomenon called “screen tearing” (where parts of the picture are not displayed in synchronization) although this will depend on the personal computer used.

Notes

- On a personal computer running Windows, if “H.264 transmission” (page 67) is set to “On”, H.264 images and JPEG images can be displayed. H.264 images will appear immediately after they appear on the Live screen (in single display mode). If it is set to “Off”, only JPEG images will appear.
- On a personal computer running Mac OS X, regardless of the “H.264 transmission” settings, only JPEG images will appear. (H.264 images will not appear.)
- When “On” is selected as the “H.264 transmission” setting, the maximum speed at which the JPEG images are refreshed is limited to 15 fps regardless of whether H.264 images are being displayed.
- The speed at which the JPEG images are refreshed may be reduced depending on the network environment, performance of the personal computer used, subjects and number of access users.
- A total of up to 14 users — both the users receiving H.264 images and the users receiving JPEG images — can access the unit at the same time.
However, depending on the settings for the “Bandwidth control(bit rate)” and “Max bit rate (per client)”, the number of users who can access the unit may be limited to 14.
- If the maximum number of users who can access the unit has exceeded the upper limit, the “access exceeded” message is displayed.
- When “Multicast” has been selected as the “Transmission type” (page 69) setting under “H.264 image settings”, the second and subsequent users receiving the H.264 images are not counted among the access users. [Windows](#)
- When “Disable” is selected for “Tally Enable” (page 50, page 81), the camera’s tally lamp will not light even when the tally signal is input. However, the area frame of the main area (IP video display area) will turn red.

Controls and settings from web screen (continued)

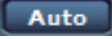

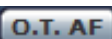

• Zoom

	Use this to enable or disable the digital zoom.
	Use this to adjust the zoom (magnification) to 1.0x.
	Use this to adjust the zoom (magnification) in the Wide direction.
	Use this to adjust the zoom (magnification) in the Tele direction.

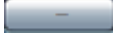

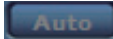
Note

- When the mouse is used for dragging and dropping from the control pad area to a position outside this area, the panning, tilting and other operations will not stop. In a case like this, click the control pad area to stop these operations.


• Focus

	Use this to switch between auto and manual focusing. When Auto is selected, the focus is adjusted automatically.
	Use this to adjust the focus in the Near direction. It does not work during automatic adjustments.
	When this is pressed while the focus is being adjusted manually, the focus will be temporarily adjusted automatically. It does not work during automatic adjustments.
	Use this to adjust the focus in the Far direction. It does not work during automatic adjustments.


• Brightness

	Use this to make the image darker. It does not work during automatic adjustments.
	Use this to make the image lighter. It does not work during automatic adjustments.
	Use this to switch the brightness adjustment between auto and manual. When Auto is selected, the picture brightness is adjusted automatically.

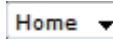

• Speed

	Use this to select the speed at which the pan, tilt, zoom and focus operations are to be performed.
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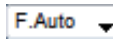
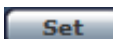
• Control pad and its buttons

	<p>To adjust the image in the horizontal or vertical direction (panning or tilting), left-click the pad and the buttons.</p> <p>The more the outside of the pad is clicked, the faster the camera operates. Adjustment is also possible by dragging the mouse.</p> <p>Right-click the pad to initiate zooming and focusing.</p> <p>When the top half of the pad is clicked in the up or down direction, the zoom (magnification) is adjusted in the Tele direction; conversely, when the bottom half of the pad is adjusted, the zoom is adjusted in the Wide direction.</p> <p>When the left half of the pad is clicked in the left or right direction, the focus is adjusted in the Near direction; conversely when the right half of the pad is adjusted, the focus is adjusted in the Far direction.</p> <p>The zooming can also be adjusted by operating the mouse wheel.</p>
---	--

• Preset

	<p>When the preset position is selected from the pull-down menu and the Move button is clicked, the camera direction moves to the preset position which was registered ahead of time.</p> <p>Preset positions are registered on the preset position screen.</p>
	<p>The camera direction moves to the preset position which is now selected on the pull-down menu.</p> <p>The settings that are reproduced at this position are the settings which were established on the "Preset Scope" menu (see pages 49, 78 and 81).</p> <p>The camera direction moves to the home position if "Home" has been selected on the pull-down menu.</p>

• Scene

	Use this if the scenes are to be switched when the shooting mode is selected from the pull-down menu and the Set button is clicked.
	Use this to switch to the shooting mode now being selected using the pull-down menu.

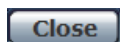
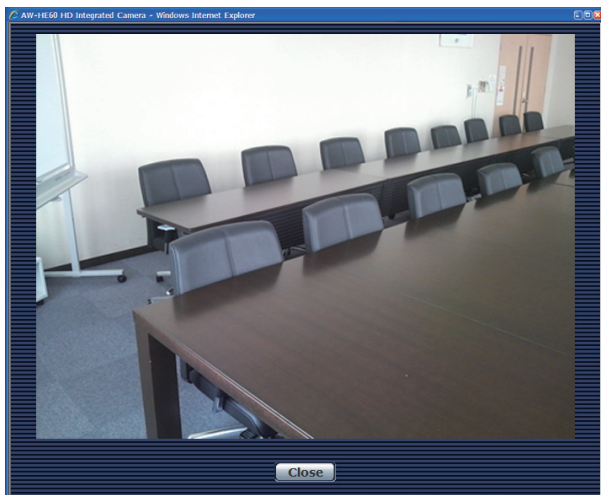
Windows

The following functions are supported by Windows only.

- **SnapShot**



This function acquires still images from the videos displayed on the Live screen.



This closes the SnapShot screen.

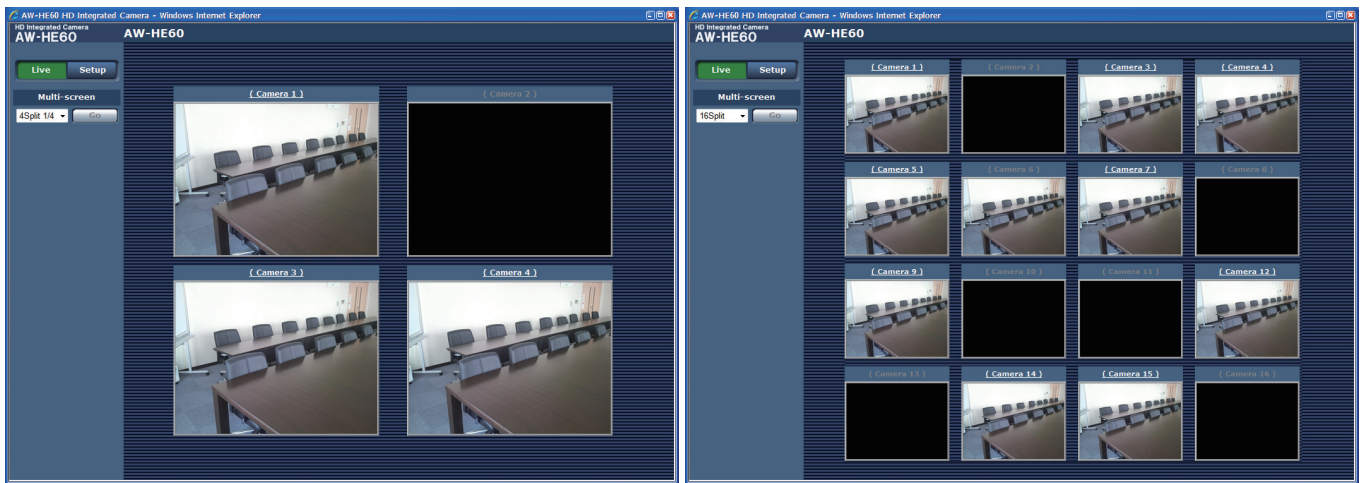
- **Full-screen display**



This function enables the full-screen display of images displayed on the Live screen on the computer screen.

■ Live screen: Multi display mode

In this mode, the images of a multiple number of cameras can be monitored on one screen (called the ‘multi screen’). The image of 4 cameras or max. 16 cameras can be monitored at one time. In order to use the multi screen, the cameras whose images are to be shown on the multi screen must be set ahead of time. With one group consisting of 4 cameras, up to four groups of cameras (a total of 16 cameras) can be registered (see page 83).



<Multi screen consisting of 4 sub-screens>

<Multi screen consisting of 16 sub-screens>

● Multi-Screen list box (Multi-screen)

The Live screen display method is selected here.

Single	The IP videos of the connected camera are displayed.
4Split 1/4	When the cameras for multi-screen display have been set ahead of time using the multi-screen setting (page 83), it is possible to view a multiple number of IP videos on a single screen. (Multi display mode)
4Split 2/4	
4Split 3/4	
4Split 4/4	
16 Split	
Go	This displays the IP videos in the mode which was set in the list box.

Memo

- The IP videos displayed on the multi screen are JPEG images only.
- It is not possible to transfer from the Live screen to the multi screen if the unit's power has been turned off, or the network cable has been disconnected, while IP videos are being displayed.

■ Setup screen

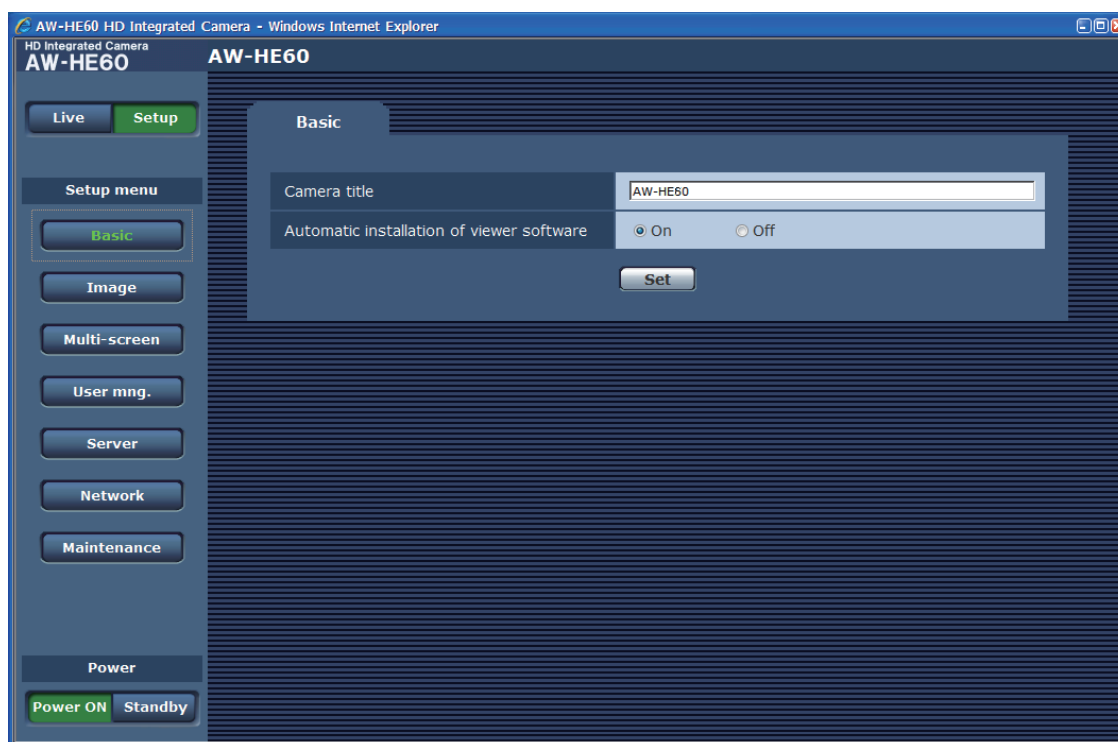
The settings for the unit are selected on this screen.

✎ Memo ✎

- The setting menu operations can be performed only by users whose access level is “1. Administrator”.
For the procedure used to set the access level, refer to page 84.

● Basic screen

Press the **Setup** button to switch to the Setup screen on which to establish the camera's settings.



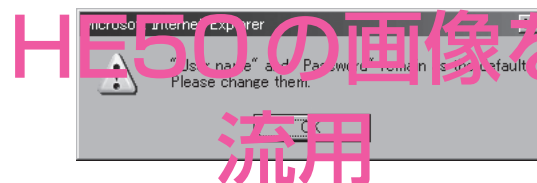
When the Setup button is pressed, the login screen shown below is displayed.



The initial settings for the user name and password are given below.

User name	admin
Password	12345

When the OK button is clicked after inputting the values, the screen shown below is displayed.
Click the OK button.



Note

- While the initial settings remain used for the user name and password, a message prompting the user to change the user name and password is displayed after authorization.
In order to ensure security, the password for the user name of “admin” must be changed without fail. It is also recommended that the password be changed at regular intervals.

● Basic button

Basic

When the Basic button is pressed, the Basic screen is displayed in the area on the right.

Camera title [0 to 20 half-size characters]

<Initial setting: AW-HE60>
Input the name of the camera here.
When the Set button is clicked, the input name appears in the camera title display area.

The following characters can be displayed.

● Half-size numeric characters	0123456789
● Half-size alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
● Symbols	!#\$%^&'()*+,-./:;<=>?@ [] ^ _ ` { } ~ \

Automatic installation of viewer software

[On, Off]
<Initial setting: On>
One of the following settings is selected for the automatic installation of the plug-in software.

On	The plug-in software is automatically installed.
Off	The plug-in software is not automatically installed.

● Camera title display area

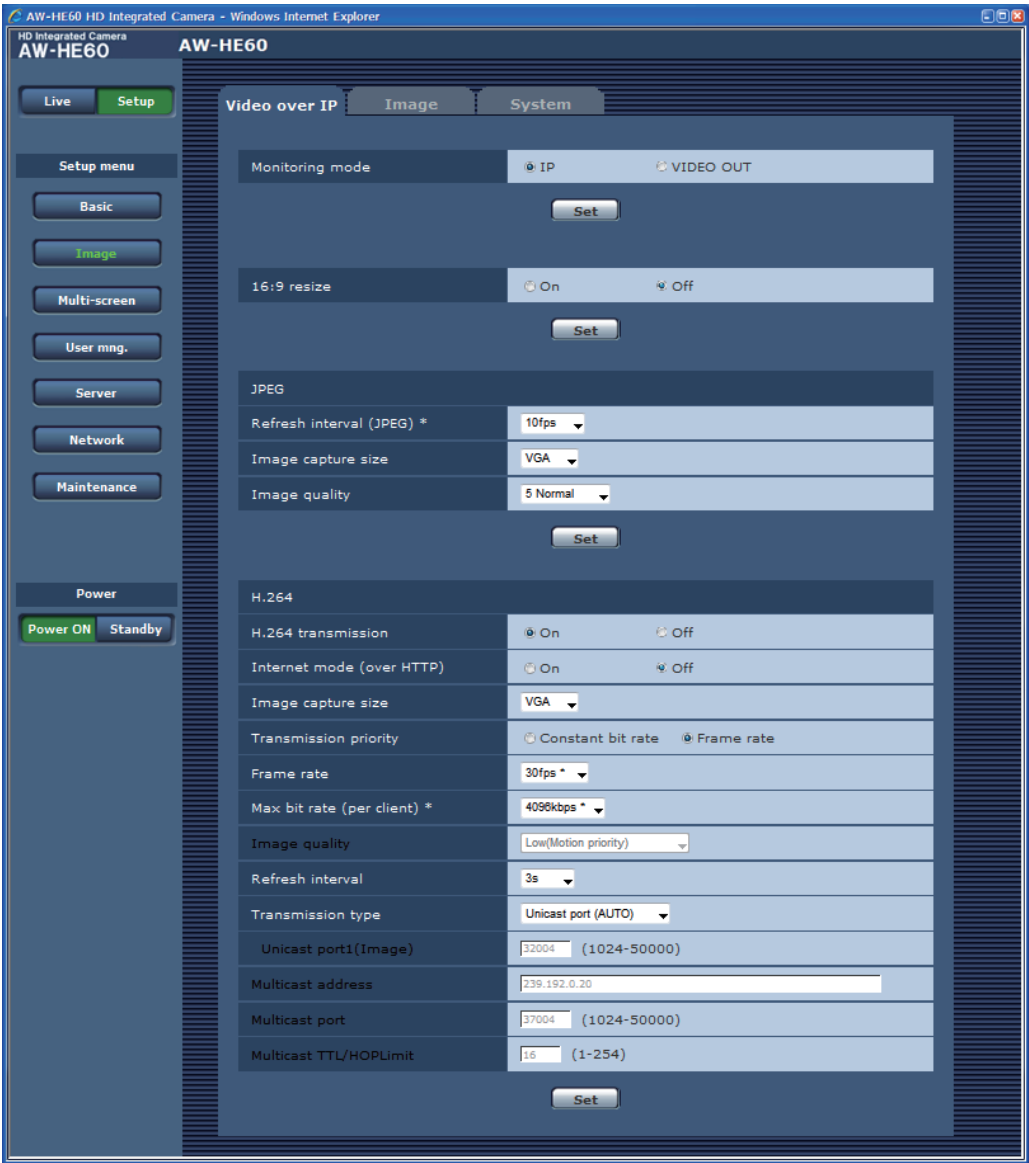


The name of the camera which was set on the Basic screen is displayed here.

● Image screen

IP video settings (Video over IP)

The JPEG image and H.264 image settings as well as the settings related to image quality are selected on this screen.



● Video over IP

Monitoring mode

IP	Select this when using the IP video output
VIDEO	Select this when using VIDEO OUT

16 : 9 resize

The IP videos transmitted in the 4:3 aspect ratio are resized to the 16:9 aspect ratio.

JPEG image settings

The image refresh interval (refresh speed), image capture size (resolution) and image quality is set here.
For the settings related to H.264 images, refer to “H.264 image settings”.

Refresh interval (JPEG)*

[1fps, 2fps, 3fps, 5fps, 6fps, 10fps, 15fps*, 30fps*]

<Initial setting: 10fps>

Select the speed at which the JPEG images are to be refreshed.

Note

- When “On” is selected as the “H.264 transmission” setting and a value with an asterisk (*) is selected, the image refresh interval may become slower than the value which is set.

Image capture size [QVGA, VGA]

<Initial setting: VGA>

QVGA or VGA is selected here as the JPEG image resolution.

Image quality

[0(Highest image quality), 1(High image quality), 2, 3, 4, 5(standard), 6, 7, 8, 9(Low image quality)]

<Initial setting: 5(standard)>

Set the image quality of the JPEG images.

H.264 image settings

Set the bit rate, image capture size (resolution), image quality, etc. of the H.264 images for each client.
For the settings related to JPEG images, refer to “JPEG image settings”.

H.264 transmission [On, Off] Windows

<Initial setting: On>

Whether to transmit the H.264 images is set here using On or Off. H.264 transmission can be used by Windows only.

On	H.264 images are transmitted.
Off	H.264 images are not transmitted.

Notes

- When “On” has been selected as the “H.264 transmission” setting, both H.264 images and JPEG images can be displayed on the live screen. Windows
- When “On” has been selected as the “H.264 transmission” setting, the image refresh interval may become slower.

Internet mode (over HTTP) [On, Off]

<Initial setting: Off>

This setting is selected when transmitting the H.264 images over the internet. H.264 images can be transmitted using the same broadband router settings as when transmitting JPEG images.

On	The H.264 images are transmitted using the HTTP port. For details on setting the HTTP port number, refer to page 89.
Off	The H.264 images are transmitted using the UDP port.

Notes

- When “On” is set, only “Unicast port (AUTO)” can be selected as the “Transmission type” setting.
- When “On” is set, it takes a few seconds before the H.264 images are displayed.
- When “On” is set, the H.264 images may not be displayed, depending on the number of users accessing the unit at the same time.
- When “On” is selected as the “H.264 transmission” setting, the number of users who can access the unit is limited to a maximum of 10.

Image capture size [QVGA, VGA]

<Initial setting: VGA>

QVGA or VGA is selected here as the H.264 image resolution.

Transmission priority

[Constant bit rate, Frame rate]

<Initial setting: Constant bit rate>

The transmission mode of the H.264 images is set here.

Constant bit rate	The H.264 images are transmitted at the bit rate which was set by "Max bit rate (per client)".
Frame rate	The H.264 images are transmitted at the frame rate which was set by "Frame rate".

Note

- When "Frame rate" is selected as the "Transmission priority" setting, there may be a reduction in the number of users who can be connected.

Frame rate

[1fps, 3fps, 5fps*, 7.5fps*, 10fps*, 15fps*, 20fps*, 30fps*]

<Initial setting: 30fps*>

The frame rate of the H.264 images is set here.

Notes

- This setting can be selected only when "Frame rate" has been selected as the "Transmission priority" setting.
- "Frame rate" is linked to "Max bit rate (per client)". If a value indicated by an asterisk (*) has been selected, the frame rate (image refresh interval) may become slower.

Max bit rate (per client)*

[64kbps, 128kbps*, 256kbps*, 384kbps*, 512kbps*, 768kbps*, 1024kbps*, 1536kbps*, 2048kbps*, 3072kbps*, 4096kbps*, Unlimited*]

<Initial setting: 4096kbps*>

The H.264 bit rate per client is selected here.

Notes

- "64kbps" or "128kbps" can be selected only when QVGA or VGA has been set.
- "Unlimited*" can be selected only when "Frame rate" has been selected as the "Transmission priority" setting.
- The H.264 bit rate is linked to the "Bandwidth control(bit rate)" of the network setting (see page 89). If a value indicated by an asterisk (*) is selected, the bit rate may become slower than the value which has been set.

Image quality

[Low(Motion priority), Normal, Fine(Image quality priority)]

<Initial setting: Normal>

The image quality of the H.264 images is selected here.

Note

- This setting can be selected only when "Constant bit rate" has been selected as the "Transmission priority" setting.

Refresh interval

[0.2s, 0.33s, 0.5s, 1s, 2s, 3s, 4s, 5s]

<Initial setting: 3s>

The H.264 image refresh interval (1-frame interval: 0.2 seconds to 5 seconds) is selected here.

When there are many errors in the network environment, setting a short refresh interval reduces the disturbance in the images.

However, the image refresh speed may also be reduced.

Transmission type

[Unicast port (AUTO), Unicast port (MANUAL), Multicast]

<Initial setting: Unicast port (AUTO)>

The transmission system for the H.264 images is selected here.

Unicast port (AUTO)	With this setting, up to 14 users can access one camera at the same time. When sending images from the unit, "Unicast port(image)" is selected automatically. If there is no need to always use the same port number for sending the H.264 images in cases where the unit is used in a network, for instance, it is recommended that "Unicast port (AUTO)" be selected.
Unicast port (MANUAL)	With this setting, up to 14 users can access one camera at the same time. When sending images from the camera, "Unicast port (MANUAL)" must be set manually. When sending H.264 images over the internet, always use the same communication-enabled port number that is set in the broadband router (hereafter, the "router"). For further details, refer to the operating instructions of the router used.
Multicast	With this setting, the number of users who can access one camera at the same time is unlimited. When sending H.264 at the "Multicast" setting, input the "Multicast address", "Multicast port", and "Multicast TTL/HOPLimit".

Note

- When "Unicast port (MANUAL)" has been selected, the "Unicast port(image)" must be set.

Multicast address

[Setting range: 224.0.0.0 to 239.255.255.255]

<Initial setting: 239.192.0.20>

The Multicast IP address is input here.

The images are sent to the specified IP address.

Note

- Input the address after checking which Multicast IP addresses can be used.

Multicast port [1024 to 50000]

(Only even numbers can be set)

<Initial setting: 37004>

The Multicast port number (used when sending images from the unit) is input here.

Note

- If "Multicast" has been selected as the "Transmission type" setting, the Multicast address must be set.

Multicast TTL/HOPLimit [1 to 254]

<Initial setting: 16>

The Multicast TTL/HOP Limit is input here.

Memo

- When sending H.264 images over the internet or VPN, the images sent may not be displayed.
In a case like this, check with the network administrator.
- When displaying Multicast images using a personal computer into which a multiple number of LAN cards have been inserted, disable the LAN card that will not be used to receive the images.

Unicast port(image) [1024 to 50000]

(Only even numbers can be set)

<Initial setting: 32004>

The Unicast port number (used when sending images from the unit) is input here.

Image



- **Image**

Image adjust

When the Setup button is clicked, the Image adjust screen is displayed.

Preset position

When the Setup button is clicked, the Preset position setting screen is displayed.

Controls and settings from web screen (continued)

Image adjust screen

When Scene is set to "FullAuto"

Image adjust

Scene: FullAuto [Set]

* setting data which changed are reflected immediately

Contrast

Contrast Mode: ☒ Auto ☐ Manual

Contrast Level: [Slider] 0

Shutter Mode: ☐ Off ☐ Step ☒ Synchro

Step: [Slider] 1/120

Synchro: [Slider] 50.2Hz

Frame Mix: Auto

Auto F.Mix Max Gain: 0dB

Gain: Auto

AGC Max Gain: ☐ 6dB ☐ 12dB ☒ 18dB

Picture

Chroma Level: [Slider] 0

AWB: [Execute]

AWB Mode: ☒ ATW ☐ AWB A ☐ AWB B

R Gain: [Slider] -----

B Gain: [Slider] -----

Detail: ☐ Off ☐ Low ☒ High

Flesh Tone Mode: ☒ Off ☐ Low ☐ High

DNR: ☐ Off ☐ Low ☒ High

Pedestal: [Slider] 0

DRS: ☒ Off ☐ Low ☐ High

Gamma Type: Normal

Gamma Level: ☐ Low ☒ Mid ☐ High

Back Light COMP.: ☒ Off ☐ On

Day / Night: ☒ Day ☐ Night

Color Matrix

Color Matrix: EBU [Setup >>]

When Scene is set to "Manual1 to 3"

Image adjust

Scene: Manual1 [Set]

* setting data which changed are reflected immediately

Contrast

Contrast Mode: ☒ Auto ☐ Manual

Contrast Level: [Slider] 0

Shutter Mode: ☐ Off ☐ Step ☐ Synchro

Step: [Slider] 1/120

Synchro: [Slider] 50.2Hz

Frame Mix: Off

Auto F.Mix Max Gain: 0dB

Gain: Auto

AGC Max Gain: ☐ 6dB ☐ 12dB ☒ 18dB

Picture

Chroma Level: [Slider] 0

AWB: [Execute]

AWB Mode: ☐ ATW ☒ AWB A ☐ AWB B

R Gain: [Slider] 0

B Gain: [Slider] 0

Detail: ☐ Off ☐ Low ☒ High

Flesh Tone Mode: ☒ Off ☐ Low ☐ High

DNR: ☐ Off ☐ Low ☒ High

Pedestal: [Slider] 0

DRS: ☒ Off ☐ Low ☐ High

Gamma Type: Normal

Gamma Level: ☐ Low ☒ Mid ☐ High

Back Light COMP.: ☒ Off ☐ On

Day / Night: ☒ Day ☐ Night

Color Matrix

Color Matrix: EBU [Setup >>]

Step、Synchroの
仕向地による違い

Controls and settings from web screen (continued)

● Scene

[FullAuto, Manual1, Manual2, Manual3]

Selected here is the shooting mode that matches the shooting situation.

Select the mode which best suits the prevailing shooting conditions and the user's preferences.

FullAuto	In this mode, the optimum settings and adjustments for the shooting conditions at hand are automatically established. When "FullAuto" has been selected, the detailed setting and adjustment menus are not displayed.
Manual1 to 3	In these modes, the detailed settings and adjustments are established manually to match the prevailing shooting conditions and the user's preferences. When the Manual1, Manual2 or Manual3 mode has been selected, the detailed setting and adjustment menu for the mode concerned is displayed.

● Contrast

Contrast Mode [Auto, Manual]

This item is used to select whether the image brightness (contrast) is to be controlled automatically or manually.

Auto	The iris, shutter speed and frame addition are controlled and the camera brightness is adjusted automatically.
Manual	Operations are performed using the manually set values.

Contrast Level [-5 to +5]

Set here is the contrast level when the image brightness is adjusted.

This item can be set when "Auto" has been selected as the "Contrast Mode" setting.

Shutter Mode [Off, Step, Synchro]

Select for camera shutter speed.

This item can be set when "Manual" has been selected as the "Contrast Mode" setting.

When a higher shutter speed is selected, fast-moving subjects do not become blurred easily but the images will be darker.

Off	The shutter is set to OFF (so that it cannot be tripped).
Step	The step shutter is set (the steps can be changed).
Synchro	The synchro shutter is set (the setting can be changed continuously).

The shutter speeds that can be set are listed below.

[When 59.94 Hz has been set as the unit's frequency]

When "Step" is selected as the "Shutter Mode"	When "Synchro" is selected as the "Shutter Mode"
1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	60.24 Hz to max. 646.21 Hz (255 steps)

[When 50 Hz has been set as the unit's frequency]

When "Step" is selected as the "Shutter Mode"	When "Synchro" is selected as the "Shutter Mode"
1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	50.20 Hz to max. 538.51 Hz (255 steps)

Frame Mix [Auto, Off, 6dB, 12dB, 18dB]

Select for frame addition (gain-up using sensor storage) amount.

This item can be set when "Off" is selected as the "Shutter Mode" item setting.

When frame addition is performed, it will appear as if the images are missing some frames.

AutoF. Mix Max Gain

[0dB, 6dB, 12dB, 18dB]

When "Auto" for the "Contrast Mode" or "Auto" for the "Frame Mix" is selected, the maximum frame addition amount can be set.

If frame addition is performed at the Auto setting, it will appear as if the images are missing some frames.

Gain

[Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB]

The image gain is adjusted here.

In locations which are too dark, adjust the gain upward; conversely, in locations which are too bright, adjust it downward.

When "Auto" is set, the light quantity is adjusted automatically.

The noise increases when the gain is increased.

AGC Max Gain [6dB, 12dB, 18dB]

When "Auto" is selected as the "Gain" setting, the maximum gain-up amount can be set.

• Picture

Chroma Level [-3 to +3]

Set here is the color intensity (chroma level) of the images.

AWB

This is used to execute automatic white balance (AWB) to set the white balance.

For details, refer to page 23.

AWB Mode [ATW, AWB A, AWB B]

The white balance mode is selected here.

Select the mode when the coloring is not natural because of the nature of the light source or other factors.

If the white color serving as the reference can be recognized, subjects can be shot with natural coloring.

ATW	In this mode, the white balance is compensated for automatically, even if changes occur in the light source or color temperature, by a process of continuous and automatic adjustment.
AWB A, AWB B	When AWB A or AWB B is selected and the white balance is executed, the adjustment results obtained are stored in the memory selected. When AWB A or AWB B is then selected, the white balance stored in the selected memory can be recalled.

Note

- When preset settings have been called from the AW-RP655, the AWB mode which was set when the preset data was registered by the AW-RP655 will be called.

R Gain, B Gain [-30 to +30]

When "AWB A" or "AWB B" is selected as the AWB Mode setting, the white balance can be finely adjusted after automatic white balance (AWB) has been performed.

Notes

- When automatic white balance (AWB) is executed, the R Gain and B Gain values are returned to "0".
- When "AWB A" or "AWB B" is selected as the AWB Mode setting, the R Gain and B Gain adjustment values can be stored in the two memories, A and B.
- When new values are set, the previous values are erased.
Use each of the memories for a different purpose in accordance with the shooting conditions.
- In terms of registering values in the preset memories, the R Gain and B Gain settings (-30 to +30) are not stored, but the white balance (color) status after adjustments have been made using the R Gain and B Gain items can be stored.
- If settings in the preset memories are recalled when "Mode A" has been selected as the Preset Scope setting, the R Gain and B Gain settings are returned to "0".
- When "ATW" has been selected as the AWB Mode setting, the R Gain and B Gain cannot be adjusted.

Detail [Off, Low, High]

The image detail (image sharpness) is adjusted here.

When "Low" or "High" is selected, the detail is enhanced.

Flesh Tone Mode [Off, Low, High]

Set here is the flesh tone mode for displaying the subjects' skin so that it appears more smoothly and eye-pleasingly.

When "Low" or "High" is selected, the effect is enhanced.

DNR [Off, Low, High]

Set here is the level of the digital noise reduction effect so that light, noise-free and clear images will be output even at night and in other low-brightness environments.

When "Low" or "High" is selected, noise can be eliminated.

However, there is an increased possibility that afterimages may occur.

Pedestal [-10 to +10]

This item is used to adjust the black level (adjust the pedestal) so that the dark parts of the images are easier to see.

These parts become darker when a negative setting is selected and, conversely, lighter when a positive setting is selected.

DRS [Off, Low, High]

Set here is the DRS function which provides just the right amount of compensation when images with significant light/dark differences are displayed.

When "Low" or "High" is selected, the effect is enhanced even more.

This may make noise more perceptible with some scenes.

Gamma Type [Off, Normal, Cinema]

Selected here is the type of gamma curve.

The selected setting takes effect when "Off" is selected as the "DRS" item setting.

Normally, the "Normal" setting is used.

When "Cinema" is selected, images giving off an atmosphere like movies can be shot.

Gamma Level [Low, Mid, High]

This item is used to adjust the gamma compensation level.

The item's setting takes effect when "Off" has been selected as the "DRS" setting and "Normal" as the "Gamma Type" setting.

When "Low" is set, the images appear sedate and composed. The resulting gamma curve has a gentle gradient in the low-brightness areas, and the contrast is sharper.

Conversely, when "High" is set, the tonal range in the dark area is expanded so that the images take on a lighter tone. The resulting gamma curve has a sharp gradient in the low-brightness areas, and the contrast is softer.

Back Light COMP. [Off, On]

“On” or “Off” is set here for the backlight compensation function.

Under backlight conditions, the function prevents darkening as a result of light striking the backs of subjects, and makes it possible to shoot images in shade or shadow more brightly.

The function takes effect when “Auto” has been selected as the Contrast Mode, Gain or Frame Mix item setting.

Day/Night [Day, Night]

This is used to select normal shooting or low light shooting (by exposing the subjects to infrared rays).

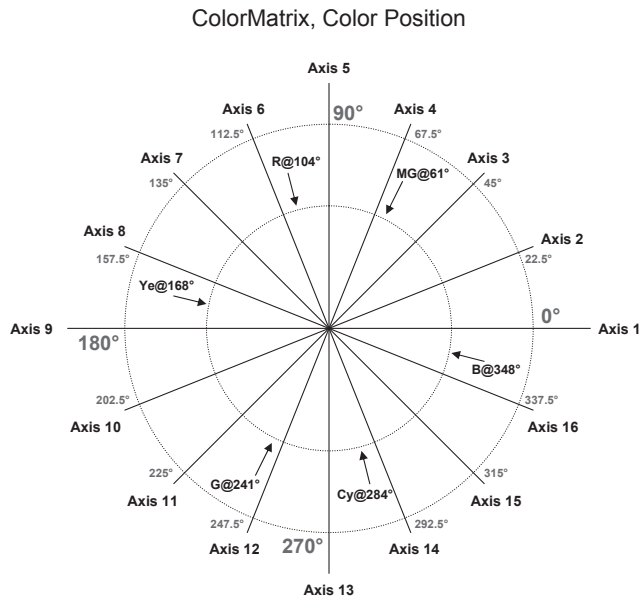
Day	Normal shooting
Night	Low light shooting

- In Night mode, Black-and-white images are output.
The lens iris is forcibly set to open.

Color Matrix [Normal, EBU, NTSC, User]

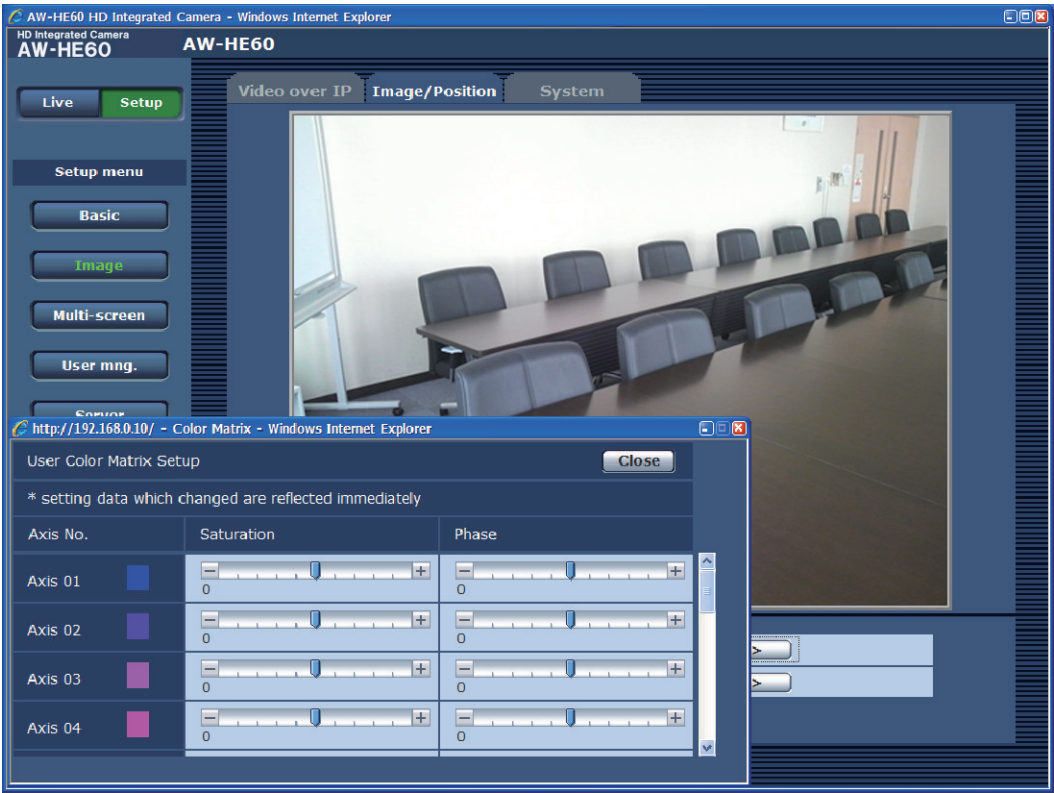
The preset color matrix data is loaded, and the saturation and phase are compensated accordingly.

When “User” is selected, the saturation and phase can be finely adjusted using the 16-axis color matrix (Axis 01 to Axis 16).



User Color Matrix Setup screen

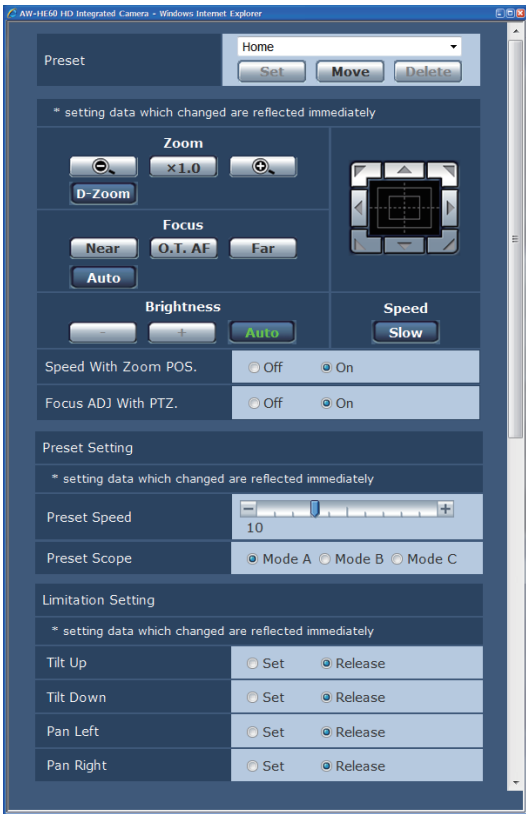
The User Color Matrix Setup screen is displayed when “User” is selected as the “Color Matrix” setting on the Image adjust screen and the Setup button is clicked.



Axis 01 to Axis 16: Saturation [−127 to +127]
The saturation of Axis 01 to Axis 16 can be finely adjusted.

Axis 01 to Axis 16: Phase [−127 to +127]
The phase of Axis 01 to Axis 16 can be finely adjusted.

Preset position setting screen



● Preset

<div>Preset</div> <div>Home</div> <div>Set</div> <div>Move</div> <div>Delete</div>	<p>This selects the preset position to be operated from the pull-down menu.</p>
<div>Set</div>	<p>This is used to register the current status in the preset position now selected on the pull-down menu.</p> <p>It does not function if “Home” has been selected on the pull-down menu.</p>
<div>Move</div>	<p>The camera direction moves to the preset position which is now selected on the pull-down menu.</p> <p>The settings that are reproduced at this position are the settings which were established on the “Preset Scope” menu (see pages 49, 78 and 81).</p> <p>The camera direction moves to the home position if “Home” has been selected on the pull-down menu.</p>
<div>Delete</div>	<p>This is used to delete the preset position setting which is currently being selected.</p> <p>It does not function if “Home” has been selected on the pull-down menu.</p>




● Zoom

<div></div>	<p>Use this to adjust the zoom (magnification) in the Wide direction.</p>
<div>x1.0</div>	<p>Use this to adjust the zoom (magnification) to 1.0×.</p>
<div></div>	<p>Use this to adjust the zoom (magnification) in the Tele direction.</p>
<div>D-Zoom</div>	<p>Use this to enable or disable the digital zoom.</p>


● Focus

<div>Near</div>	<p>Use this to adjust the focus in the Near direction.</p> <p>It does not work during automatic adjustments.</p>
<div>O.T. AF</div>	<p>When this is pressed while the focus is being adjusted manually, the focus will be temporarily adjusted automatically.</p> <p>It does not work during automatic adjustments.</p>
<div>Far</div>	<p>Use this to adjust the focus in the Far direction.</p> <p>It does not work during automatic adjustments.</p>
<div>Auto</div>	<p>Use this to switch between auto and manual focusing.</p>

• Brightness

	Use this to make the image darker. It does not work during automatic adjustments.
	Use this to make the image lighter. It does not work during automatic adjustments.
	Use this to switch the picture brightness adjustment between auto and manual.

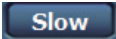
• Control pad and its buttons

	<p>To adjust the image in the horizontal or vertical direction (panning or tilting), left-click the pad and the buttons.</p> <p>The more the outside of the pad is clicked, the faster the camera operates. Adjustment is also possible by dragging the mouse.</p> <p>Right-click the pad to initiate zooming and focusing.</p> <p>When the top half of the pad is clicked in the up or down direction, the zoom (magnification) is adjusted in the Tele direction; conversely, when the bottom half of the pad is adjusted, the zoom is adjusted in the Wide direction.</p> <p>When the left half of the pad is clicked in the left or right direction, the focus is adjusted in the Near direction; conversely when the right half of the pad is adjusted, the focus is adjusted in the Far direction.</p> <p>The zooming can also be adjusted by operating the mouse wheel.</p>
---	--

Note

- When the mouse is used for dragging and dropping from the control pad area to a position outside this area, the panning, tilting and other operations will not stop. In a case like this, click the control pad area to stop these operations.

• Speed

	Use this to select the speed at which the pan, tilt, zoom and focus operations are to be performed.
---	---

• Speed With Zoom POS.

“Off” or “On” is set here for the function used to adjust the pan-tilt adjustment speed in conjunction with the zoom magnification.

Off	The panning and tilting operations will not become slower in the zoom status.
On	The panning and tilting operations will become slower in the zoom status.

This function has no effect during preset operations.

• Focus ADJ With PTZ.

“Off” or “On” is set here for the function which compensates for out-of-focusing when it occurs during panning, tilting or zooming operations.

Off	Out-of-focusing is not compensated.
On	Out-of-focusing is compensated.

When “Off” is set, adjust the focus as required after zooming or set the focus to the auto mode.

This item can be selected only when “Manual” has been selected as the “Focus Mode” setting.

● Preset Setting

Preset Speed [1 to 30]

There are 30 preset pan-tilt operation speeds when regenerating the camera direction and other information which are registered in the preset memory.

Notes

- If a high value is selected for the Preset Speed setting, the image on the screen may shake when operation stops.
- When connecting the unit to the AW-RP655 for use, the “DIAGONAL SPEED (P/T SETTING)” setting of the AW-RP655 takes effect.
To change the Preset Speed, change the AW-RP655 setting.

Preset Scope [Mode A, Mode B, Mode C]

Selected here are the setting items to be recalled when the contents of the preset memory are regenerated.

Mode A	Pan, Tilt, Zoom (including digital zoom), Focus, Iris, Gain, white balance adjustment value
Mode B	Pan, Tilt, Zoom (including digital zoom), Focus, Iris
Mode C	Pan, Tilt, Zoom (including digital zoom), Focus

● Limitation Setting

This establishes the up, down, left and right limit settings of the pan-tilt head.

First, move the pan-tilt head to the position where the limit is to be set, and press the corresponding button below to set the direction (up, down, left or right) in which the limit is to be set.

After each setting has been selected, press the Set button to enter the setting.

Tilt Up	Use this to save the current position as the upward limit.
Tilt Down	Use this to save the current position as the downward limit.
Pan Left	Use this to save the current position as the leftward limit.
Pan Right	Use this to save the current position as the rightward limit.
Set/Release	Use this to enable or disable the limit setting in each direction.

Controls and settings from web screen (continued)

System screen

This menu has items that relate to the genlock phase adjustment and camera's output image settings.



- **Genlock**
(AW-HE60S only)

Horizontal Phase [-206 to +49]

This is used to adjust the horizontal phase during genlock.

Subcarrier Phase Coarse

[0° to 315°]

This is used to adjust coarsely the color phase during genlock.

This setting is valid for the VBS signal output.

Subcarrier Phase Fine [-127 to +127]

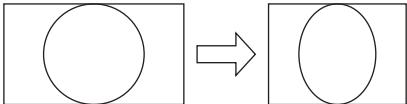
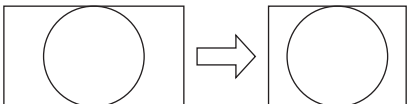
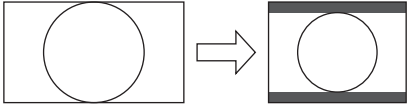
This is used to adjust finely the color phase during genlock.

This setting is valid for the VBS signal output.

- Output**
This item's setting is reflected when the Set button is pressed.

Format
[1080/59.94p, 1080/59.94i, 720/59.94p, 480/59.94p, 480/59.94i, 1080/29.97PsF, 1080/50p, 1080/50i, 720/50p, 576/50p, 576/50i, 1080/25PsF]
The video format is changed on this screen.
The formats of the images which can be output differ between the AW-HE60H and AW-HE60S.
For details on how to change the format, refer to "Changing the format" (page 48).

Down CONV. Mode
[Squeeze, SideCut, LetterBox]
The down-conversion mode is selected here.

Squeeze	When the 4:3 aspect ratio has been set for the monitor screen, the images are squeezed horizontally and extended vertically changing the view of the angle. 
SideCut	With the vertical height serving as the reference, the parts which extend beyond this at the two sides are cropped changing the view of the angle. 
LetterBox	With the horizontal width serving as the reference, black bands are added at the top and bottom changing the view of the angle. 

- When output is selected for the color bar, the mode is fixed to Squeeze.
If "SideCut" or "LetterBox" has been selected, the images will not appear for a few seconds when the color bar display is set to ON or OFF.

HDMI Color (AW-HE60H only)
[RGB-NOR, RGB-ENH, YCbCr422, YCbCr444]
Set here is the HDMI color output.

- When an HDMI monitor is used, use "YCbCr422" under normal circumstances.
- In cases where, for instance, HDMI (RGB) signals are converted and output to a DVI monitor, the settings required will differ depending on the color gradation supported by the monitor.

RGB-NOR	The RGB output signals are output in the 16 to 235 range.
RGB-ENH	The RGB output signals are output in the 0 to 255 range.

- If the black parts of the images appear overexposed when "RGB-NOR" has been selected, use the "RGB-ENH" setting instead.
- Conversely, if the images are displayed with a loss of dark detail when "RGB-ENH" has been selected, use the "RGB-NOR" setting instead.

Note

- If an HDMI Color setting which is not supported by the monitor has been specified, the HDMI Color setting may be changed automatically. (The menu display will remain unchanged.)

- Frequency [59.94Hz, 50Hz]**
This item is selected to switch the frame frequency.
- When the frequency is switched, "Format" is set as follows.

59.94Hz		50Hz
1080/59.94p(i)	↔	1080/50p(i)
1080/59.94i	↔	1080/50i
720/59.94p	↔	720/50p
480/59.94p(i)	↔	576/50p(i)
480/59.94i	↔	576/50i
1080/29.97PsF	↔	1080/25PsF

• Other

This item's setting is reflected when the Set button is pressed.

Install Position [Desktop, Hanging]

"Desktop" or "Hanging" is selected here as the method used to install the unit.

Desktop	Stand-alone installation
Hanging	Suspended installation

- When "Hanging" has been selected, the top, bottom, left and right of the images will be reversed, and up/down/left/right control for panning and tilting will also be reversed.

Preset Speed [1 to 30]

There are 30 preset pan-tilt operation speeds when regenerating the camera direction and other information which are registered in the preset memory.

Notes

- If a high value is selected for the Preset Speed setting, the image on the screen may shake when operation stops.
- When connecting the unit to the AW-RP655 for use, the "DIAGONAL SPEED (P/T SETTING)" setting of the AW-RP655 takes effect.
To change the Preset Speed, change the AW-RP655 setting.

Preset Scope [Mode A, Mode B, Mode C]

Selected here are the setting items to be recalled when the contents of the preset memory are regenerated.

Mode A	Pan, Tilt, Zoom (including digital zoom), Focus, Iris, Gain, White-BAL
Mode B	Pan, Tilt, Zoom (including digital zoom), Focus, Iris
Mode C	Pan, Tilt, Zoom (including digital zoom), Focus

Digital Zoom [Disable, Enable]

"Enable" or "Disable" is set here for the digital zoom function.

If zooming is performed toward the Tele end beyond the maximum position when "Enable" has been selected, the digital zoom can be operated continuously. Zooming will stop temporarily at the position where the optical zoom and digital zoom are switched so after it has stopped at this position, proceed with zooming again.

When the setting is changed to "Disable" while already in the digital zoom region, the zoom will automatically move to the maximum position of the optical zoom.

Note

- The digital zoom is set to off when color bars are displayed during digital zooming.

Speed With Zoom POS. [Off, On]

"Off" or "On" is set here for the function used to adjust the camera direction's adjustment speed in conjunction with the zoom magnification.

When "On" is set, the panning and tilting operations will become slower in the zoom status.

This function has no effect during preset operations.

Focus Mode [Auto, Manual]

"Auto" or "Manual" is set here for the focusing function.

Auto	The subjects are always brought into focus automatically.
Manual	The focus is operated manually.

Focus ADJ With PTZ. [Off, On]

"Off" or "On" is set here for the function which compensates for out-of-focusing when it occurs during panning, tilting or zooming operations at the manual focus setting.

When "Off" is set, adjust the focus as required after zooming or set the focus to the auto mode.

This item can be selected only when "Manual" has been selected as the "Focus Mode" setting.

Tally Enable [Disable, Enable]

"Enable" or "Disable" is set here for the function which turns on or turns off the tally lamp using the tally control signal.

OSD Mix

Whether the camera menus, statuses and other displays are to be turned Off or On can be selected here for each output picture.

SDI(HDMI)/COMP [Off, On, Off ByBrowser]

Browser/Video [Off, On]

Off	The camera menus and statuses are not displayed on the output pictures targeted by the setting items listed above.
On	The camera menus and statuses are displayed for the output pictures covered by the setting items listed above.
Off ByBrowser	If a menu has been opened from the browser screen, the camera menus and statuses are not displayed on the output images for which this setting is established.

Note

- Even if the display has been set to the off position the camera menus will still be displayed for one minute whenever the power of the unit is turned on.

OSD Off With Tally [Off, On]

This is used to enable or disable the function for clearing the OSD menu displays when the tally signal is received by a command or contact.

When the tally signal is released, the original OSD menu displays are restored.

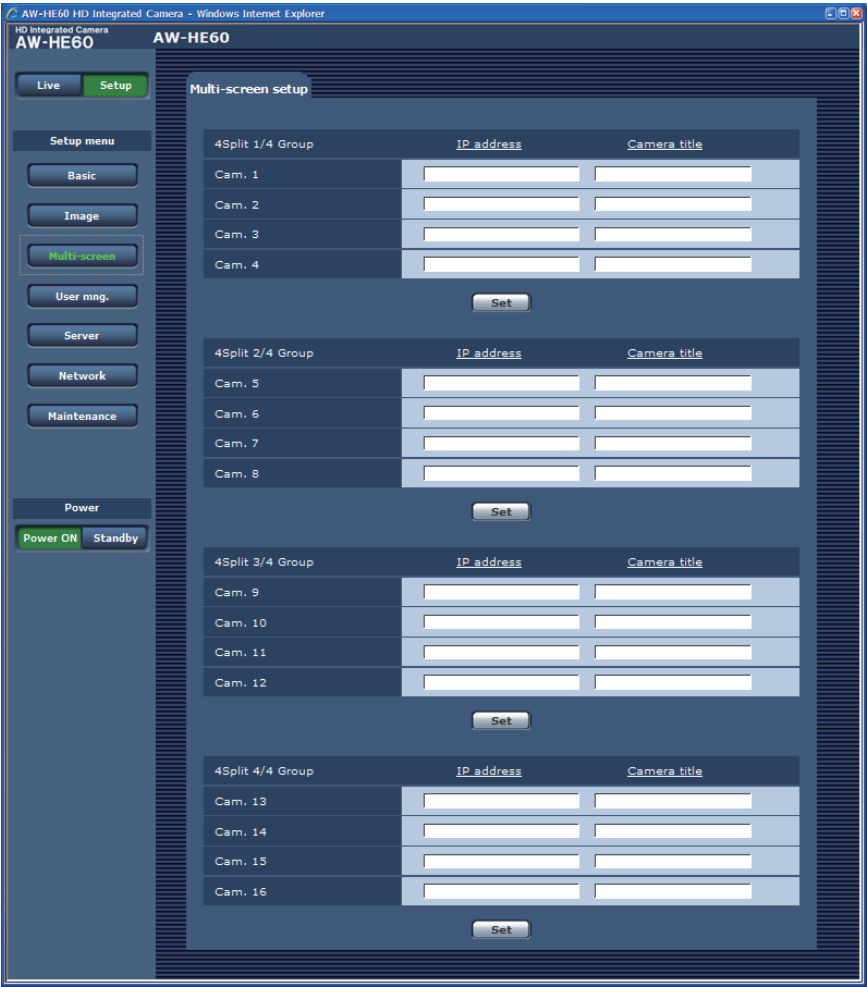
OSD Status [Off, On]

“Off” or “On” is set here for the status display which appears during AWB operations.

● Multi-screen

The cameras whose images are to be displayed on the multi screen are set here.

Multi-screen setup



- **IP address**
[1 to 128 half-size characters]
<Initial setting: blank>
Input here the IP address of the camera whose images are to be displayed on the multi screen or the host name ("Camera title"). With one group consisting of 4 cameras, up to four groups of cameras (a total of 16 cameras) can be registered.
Input as follows if the HTTP port number of the camera whose images are to be displayed has been changed.
Example of input:

Address	192.168.0.10: 8080
---------	--------------------

Memo

- When the host name is to be set, the DNS setting of the personal computer that will display the multi screen is required (see page 89).

- **Camera title**
[0 to 20 half-size characters]
<Initial setting: blank>
Input the camera title here. The camera title which has been input is displayed on the multi screen.

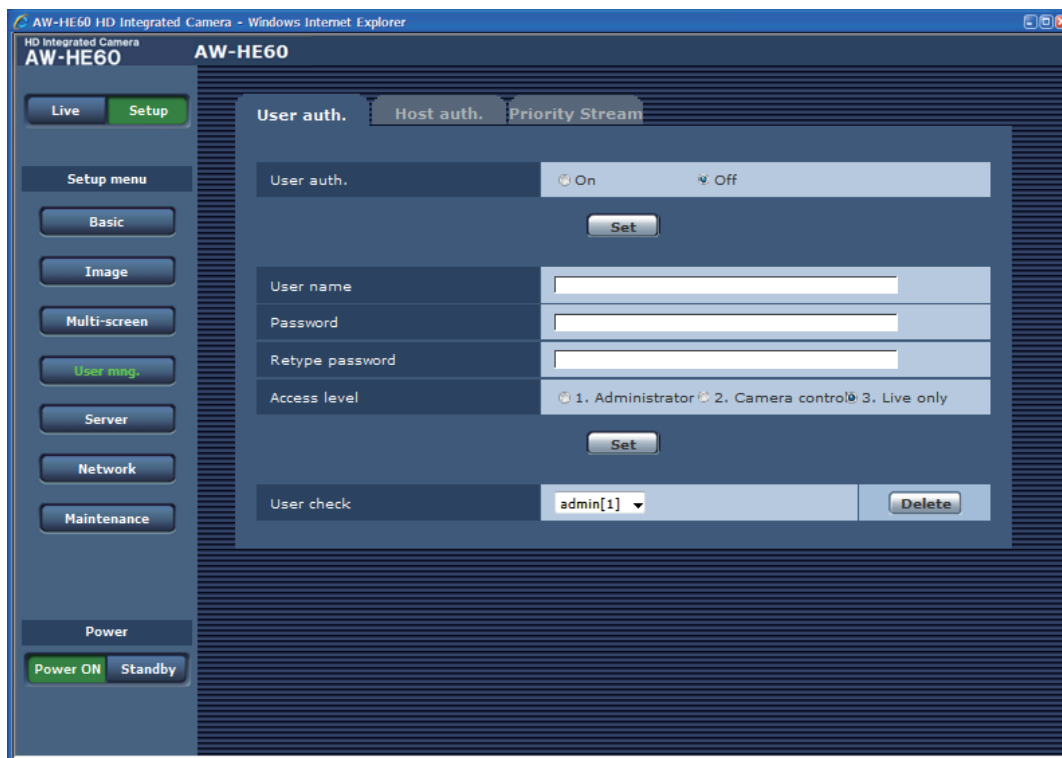
Memo

- When a multi screen with 16 sub-screens has been selected, the camera titles may be displayed only in part.

● User mng.

The authorization of those users who can access the camera from a personal computer or AW-RP50 and those IP addresses, from which the camera can be accessed, is registered on this screen in order to restrict any other access. The screen itself consists of three tabs, "User auth.", "Host auth" and "Priority Stream".

User auth. screen



● User auth.

<Initial setting: Off>

User authorization is set to "On" or "Off" here.
Enter the setting using the Set button.

● User name [1 to 32 half-size characters]

<Initial setting: blank>

The user name is input here.
Enter the setting using the Set button.

● Password

● Retype password [4 to 32 half-size characters]

<Initial setting: blank>

The password is input here.
Enter the setting using the Set button.

✎ Memo ✎

- If "On" has been selected as the "User auth." setting, control will no longer be exercised from the AW-RP50 remote camera controller.
Use "Host auth." (page 85) if the AW-RP50 is to be used.

● Access level

<Initial setting: 3. Live only>

Select one of the following settings as the user access level.

Enter the setting using the Set button.

1. Administrator	This access level allows the user to perform all the unit's operations.
2. Camera control	This access level allows only Live screen operations to be performed.
3. Live only	This access level enables only Live screen to be displayed. The unit cannot be operated or set.

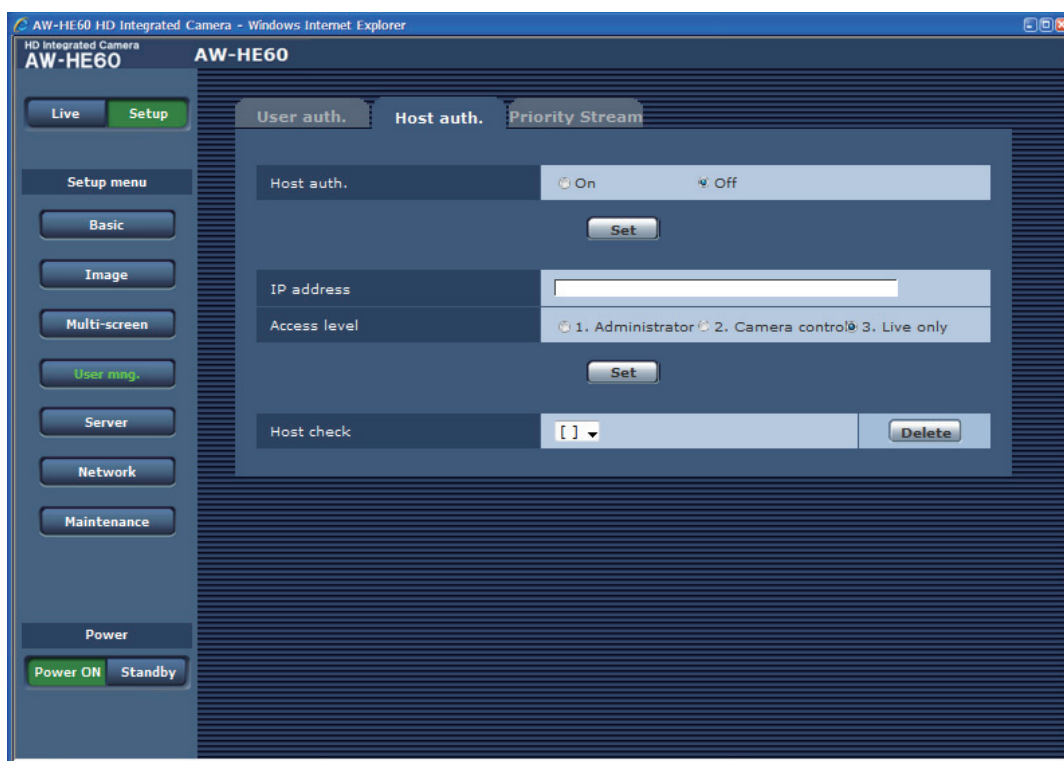
● User check

A pull-down menu can be opened here, and the registered users checked.

A registered user is indicated in the form of "Registered user name [Access level]".
(Example: admin[1])

To delete a registered user, select the user to be deleted, and click the Delete button on the right.

Host auth. screen



- **Host auth.**

<Initial setting: Off>

Host authorization is set to “On” or “Off” here.

- **IP address**

<Initial setting: blank>

The IP address of the personal computer from which access to the camera is allowed is input here.

The host name cannot be input as the IP address.

Memo

- When the “IP address/subnet mask length” is input, the personal computers which are allowed to access the camera can be restricted on a subnet by subnet basis. If, for instance, “192.168.0.1/24” has been input and the “2. Camera control” setting has been selected as the access level setting, the personal computers from “192.168.0.1” to “192.168.0.254” will be able to access the camera at the “2. Camera control” access level.
- When an already registered IP address is input and the Set button is clicked, the host information will be overwritten.

- **Access level**

<Initial setting: 3. Live only>

Select one of the following settings as the host access level.

1. Administrator
2. Camera control
3. Live only

For details on the access level, refer to page 84.

- **Host check**

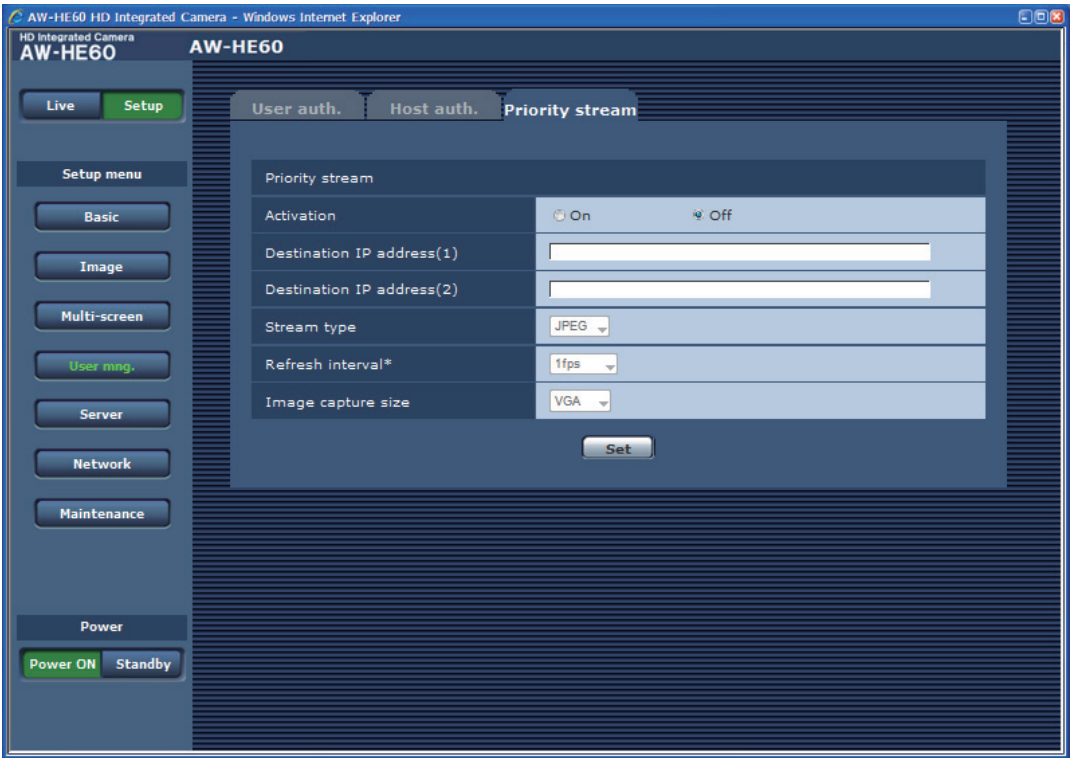
A pull-down menu can be opened here, and the IP addresses of the registered hosts checked. A host is indicated in the form of “Registered IP address [Access level]”.

(Example: 192.168.0.21 [1])

To delete a registered host (IP address), select the host to be deleted, and click the Delete button on the right.

Priority stream

Selected on this screen are the settings for the priority stream which enables the images to be sent with no reduction in image quality or image refresh speed even when a multiple number of users are accessing the unit at the same time.



• Priority stream

Activation

<Initial setting: Off>
Whether to use priority stream transmission is set here using “On” or “Off.”

Note

- If “On” has been selected as the priority stream “Activation” setting, the number of users who are allowed access may be limited.

Destination IP address(1)

<Initial setting: blank>
The IP address of the first send destination is input here.

Destination IP address(2)

<Initial setting: blank>
The IP address of the second send destination is input here.

Stream type

<Initial setting: JPEG>
JPEG or H.264 is set as the stream type here.

JPEG	JPEG images are sent.
H.264	H.264 images are sent. Windows

Refresh interval*

[1fps, 2fps, 3fps, 5fps, 6fps, 10fps, 15fps*, 30fps*]
<Initial setting: 1fps>
The speed at which the images are to be refreshed is set here. This setting takes effect only when “JPEG” has been selected as the “Stream type” setting.

Note

- When “On” is selected as the “H.264 transmission” (page 67) and a value with an asterisk (*) is selected, the image refresh interval may become longer than the value which is set.

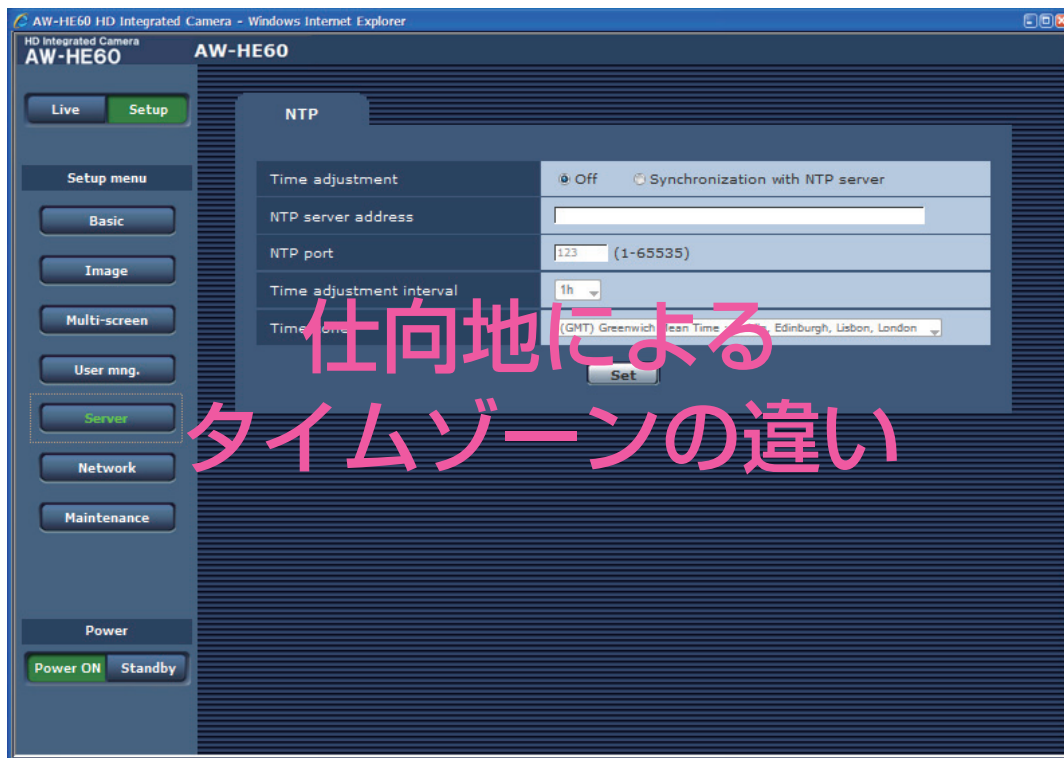
Image capture size [QVGA, VGA]

<Initial setting: VGA>
QVGA or VGA is selected here as the image resolution. This setting takes effect only when “JPEG” has been selected as the “Stream type” setting.

● Server

This screen has items that relate to the NTP server addresses, port numbers and other NTP server settings.

NTP screen



● Time adjustment

<Initial setting: Off>

Select one of the following settings as the time adjustment method.

The time is adjusted by the method selected here and used as the unit's standard time.

Off	The time is counted from 0:00 on January 1, 1990 as the unit's startup time.
Synchronization with NTP server	The time automatically adjusted in synchronization with the NTP server is used as the unit's standard time.

● NTP server address

[1 to 128 half-size characters]

<Initial setting: blank>

The host name or IP address of the NTP server is input here.

Note

- To input the "NTP server address" host name, the DNS setting (page 89) must be selected on the Network screen of the Network settings.

● NTP port [1 to 65535]

<Initial setting: 123>

The port number of the NTP server is input here.

● Time adjustment interval

<Initial setting: 1h>

The interval (1 to 24 hours in 1-hour increments) for acquiring the time from the NTP server and updating the time is selected here.

● Time zone

<Initial setting for AW-HE60HN/AW-HE60SN:

(GMT -08:00) Pacific Time (US & Canada), Tijuana>

<Initial setting for AW-HE60HE/AW-HE60SE:

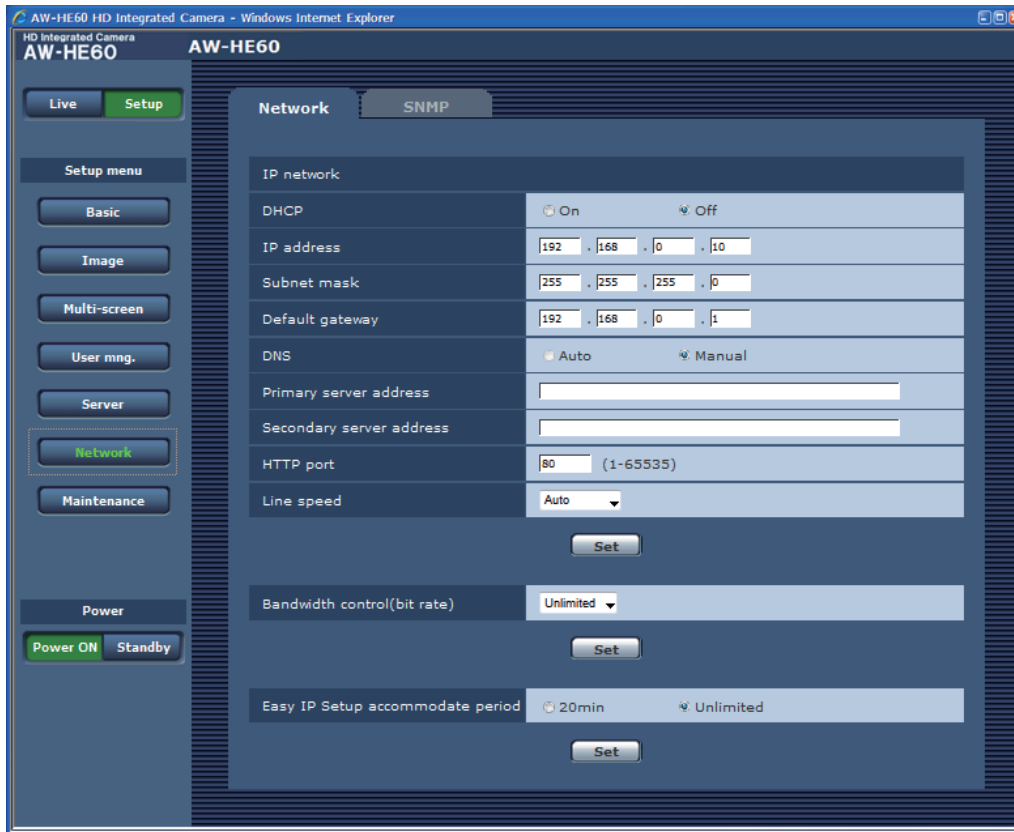
(GMT -08:00) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London>

Select the time zone that corresponds with the region in which the unit is going to be used.

● Network

This screen has items that relate to the network settings and SNMP (Simple Network Management Protocol). It consists of the two tabs of “Network” and “SNMP”.

Network screen



● IP network

DHCP

<Initial setting: Off>

Whether the DHCP function is to be used is set by selecting “On” or “Off” here. Set the DHCP server in such a way that the same IP address cannot be used by personal computers without the DHCP function or by other network cameras.

For details on the server settings, consult your network administrator.

IP address

<Initial setting: 192.168.0.10>

Input the unit's IP address here when the DHCP function is not going to be used. Input an address that will not duplicate an existing IP address which has been set for a personal computer or another network camera.

Memo

- Multiple IP addresses cannot be used even when the DHCP function is used.
For details on the DHCP server settings, consult your network administrator.

Controls and settings from web screen (continued)

Subnet mask

<Initial setting: 255.255.255.0>

Input the unit's subnet mask here if the DHCP function is not going to be used.

Default gateway

<Initial setting: 192.168.0.1>

Input the unit's default gateway if the DHCP function is not going to be used.

Memo

- Multiple IP addresses cannot be used for the default gateway even when the DHCP function is used.
For details on the DHCP server settings, consult your network administrator.

DNS

<Initial setting: Manual>

Whether the DNS server address is to be acquired automatically (Auto) or manually (Manual) is input here. If "Manual" has been selected, the DNS settings must be established.

If "Auto" is selected when the DHCP function is going to be used, the DNS server address is acquired automatically.

For further details, consult your system administrator.

Primary server address

Secondary server address

<Initial setting: blank>

Input the IP address of the DNS server if the "Manual" setting has been selected for "DNS".

For details on the IP address of the DNS server, consult your system administrator.

HTTP port [1 to 65535]

<Initial setting: 80>

The port number is allocated here separately.

The following port numbers are used by the unit therefore cannot be used.

Port numbers already used

20, 21, 23, 25, 42, 53, 67, 68, 69,
110, 123, 161, 162, 554, 995, 10669, 10670,
59000 to 59999, 60000 to 61000

Line speed

<Initial setting: Auto>

Select one of the following data line speeds.

Normally, it is recommended that the "Auto" default setting be used.

Auto	The line speed is set automatically.
100 M-Full	The line speed is set to 100 Mbps full duplex.
100 M-Half	The line speed is set to 100 Mbps half duplex.
10 M-Full	The line speed is set to 10 Mbps full duplex.
10 M-Half	The line speed is set to 10 Mbps half duplex.

Bandwidth control(bit rate)

<Initial setting: Unlimited>

Select one of the following data bandwidth settings.

Unlimited	384 kbps	2048 kbps
64 kbps	512 kbps	4096 kbps
128 kbps	768 kbps	
256 kbps	1024 kbps	

Easy IP Setup accommodate period

<Initial setting: Unlimited>

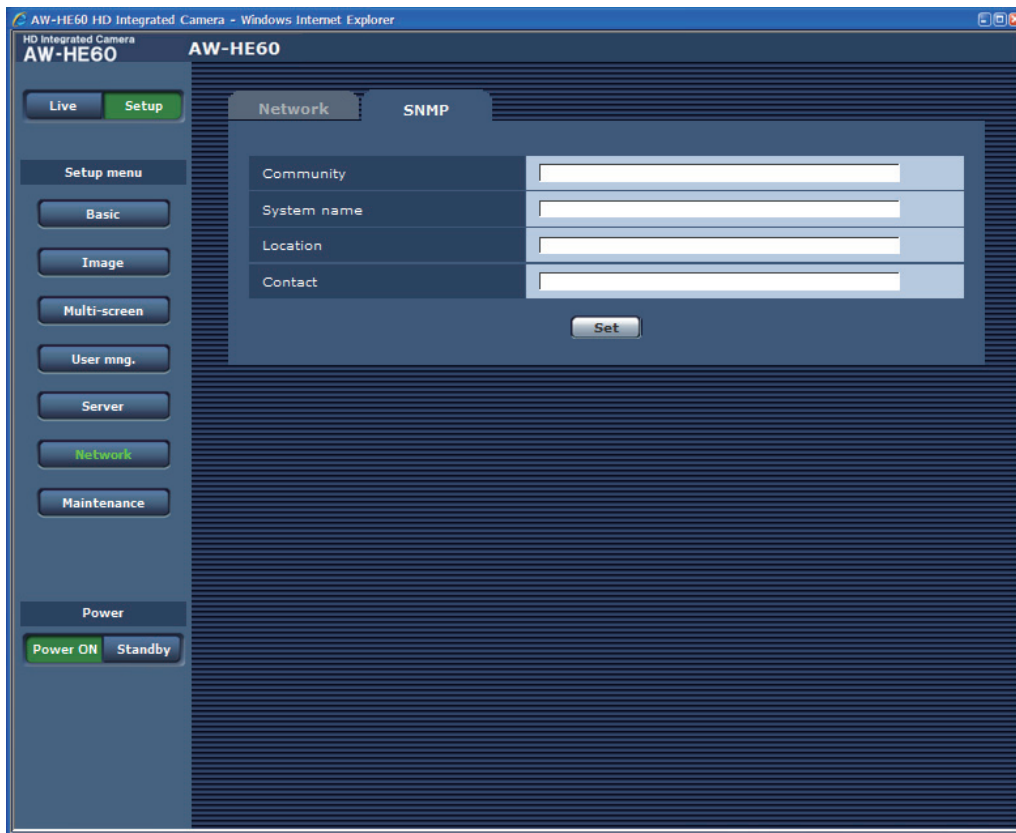
Select "20min" or "Unlimited" as the time for enabling the operation of the network settings from the Easy IP Setup Software.

20min	The setting operations from the Easy IP Setup Software are enabled for 20 minutes after the camera has started operating.
Unlimited	The setting operations from the Easy IP Setup Software are enabled at all times.

Controls and settings from web screen (continued)

SNMP screen

The settings related to the SNMP function are selected on this screen.
When the SNMP manager is used for the connection, the unit's statuses can be checked.
When the SNMP function is to be used, consult with your network administrator.



- **Community [0 to 32 half-size characters]**
<Initial setting: blank>
Input here the community name which is to be monitored.

Note

- When using the SNMP function, be absolutely sure to input the community name.
This function cannot be used if the community name field is left blank.

- **Location [0 to 32 half-size characters]**
<Initial setting: blank>
Input here the location where the unit has been installed.

- **Contact [0 to 255 half-size characters]**
<Initial setting: blank>
Input here the email address or telephone number of the administrator.

- **System name [0 to 32 half-size characters]**
<Initial setting: blank>
Input here the system name for controlling the unit using the SNMP function.

● Maintenance

Among the various maintenance operations performed on this screen are system log checks, system version upgrading and initialization of the unit.

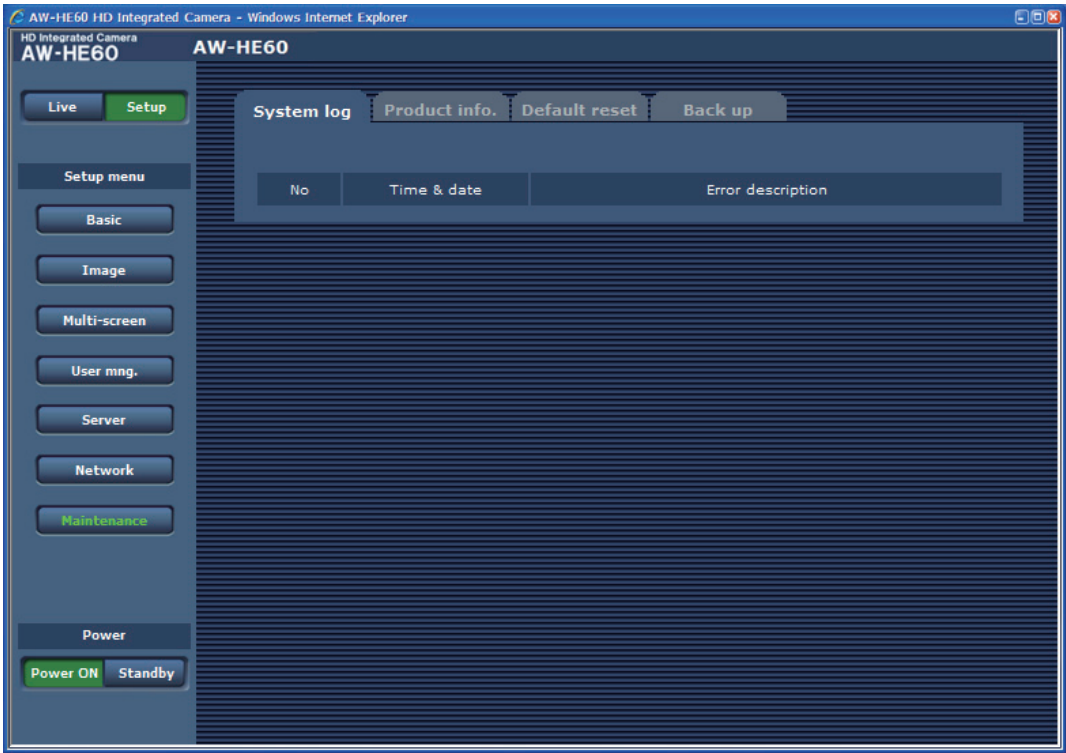
The screen itself consists of four tabs: “System log”, “Product info.”, “Default reset” and “Back up”.

System log screen

A maximum of a hundred system logs can be stored in the unit’s internal memory.

When this maximum number has been exceeded, the old logs are overwritten successively by the new logs.

The logs are cleared when the unit’s power is turned off.



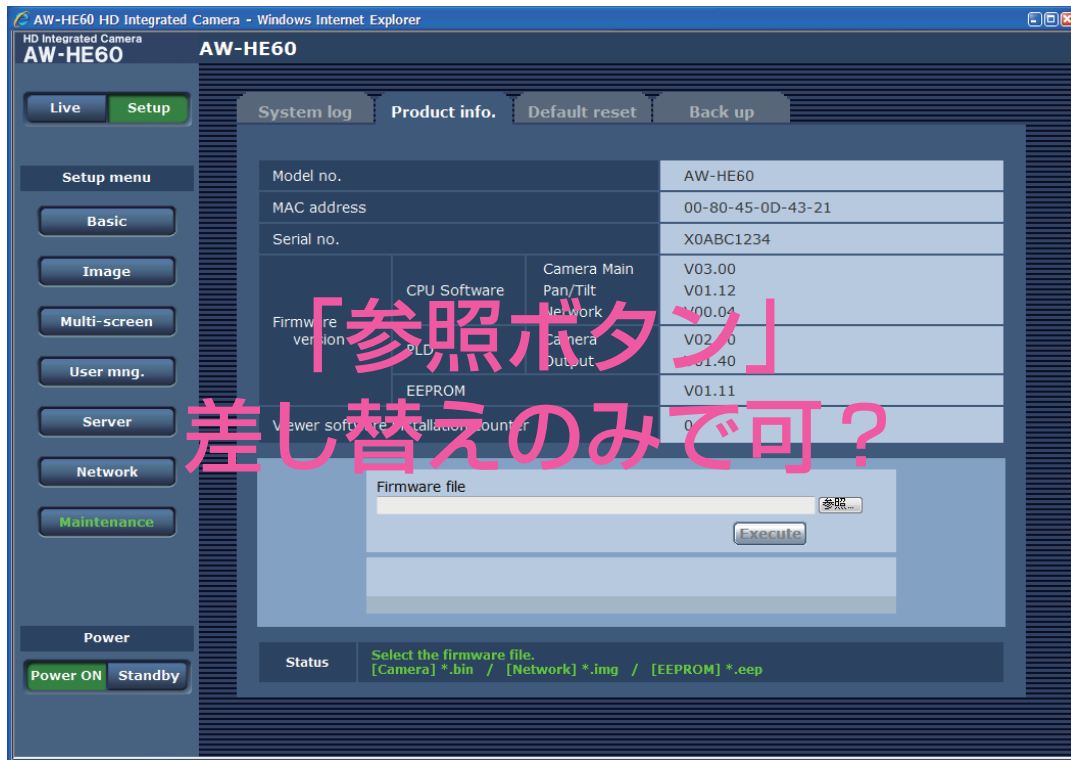
- **No**
The running numbers of the system logs are displayed here.
 - **Time & date**
The times and dates when the logs were generated are displayed here.
The 24-hour system is used to display this information.
- **Error description**
Details of the error logs are displayed here.
For further details on the system logs, refer to page 100.

Controls and settings from web screen (continued)

Product info. screen

The versions of the unit's software can be checked on this screen.

The "Model no.", "MAC address", "Serial no.", "Firmware version" and other information about the unit is displayed.



- **Model no.**

The unit's model number is displayed here.

- **MAC address**

The unit's MAC address is displayed here.

- **Serial no.**

The unit's serial number is displayed here.

- **Firmware version**

CPU Software Camera Main

This is selected to display the software version of the camera unit.

CPU Software Pan/Tilt

This is selected to display the software version of the pan-tilt unit.

CPU Software Network

This is selected to display the software version of the network unit.

PLD Camera

This is selected to display the PLD version of the camera unit.

PLD Output

This is selected to display the PLD version of the output unit.

EEPROM

This is selected to display the EEPROM version.

- **Viewer software installation counter**

The number of plug-in viewer software applications which have been installed automatically from the unit is displayed by this counter.

- **Firmware file**

1 After consulting with your dealer, download the latest software to the hard disk of your personal computer.

Notes

- No spaces or full-size characters can be used for the directory in which the software will be stored.
- Keep the maximum combined number of characters to be used for the name of the directory in which the software will be stored and for the name of the software which has been downloaded to less than 250 characters.

2 Click the Browse button, and specify the downloaded software.

3 Click the Execute button.

The software upgrade check screen is displayed. After upgrading the software version, be absolutely sure to delete the temporary Internet files.

Note

- Be absolutely sure to upgrade the software versions from the personal computer in the same network (LAN) as the unit whose firmware version is to be updated.

- **Status**

The current status of the unit is displayed here.

Notes

- After the Execute button has been pressed, it will take about one minute with the Camera Main software or about 3 minutes with the Network software for the progress bar that indicates the progress made in the version upgrading to appear.
- Use the personal computer on the same subnet as the camera to upgrade the software version.
- Before using the version upgrading software, be absolutely sure to check the precautions to be observed with your dealer, and follow the dealer's instructions.

- Use the following files specified by Panasonic Corporation as the software used for version upgrading.

Camera Main	bin files
Network	img files
EEPROM	eep files

- Be absolutely sure to write the filenames as below (see *) for the files of the software used for version upgrading.

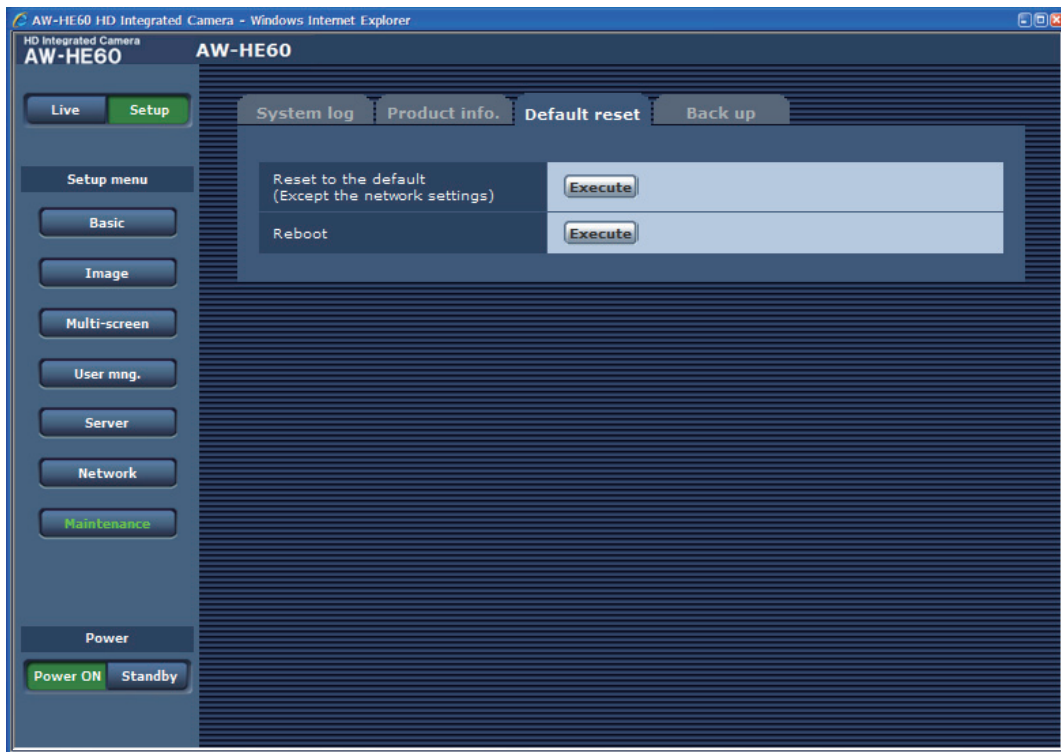
Camera Main	he60_cameramain_XXXXX.bin*
Network	he60_network_XXXXX.img*
EEPROM	he60_cam_eepXXXXX.eep*

*: Enter the software version in the "XXXXX" part.

- Do not turn off the unit's power while a software version is being upgraded. (Do not turn off the power until the progress bar display is cleared.)
- While a software version is being upgraded, do not attempt to execute any other operations until the version has been upgraded.

Default reset screen

The unit's setting data is initialized and the unit is restarted on this screen.



- **Reset to the default**

- (Except the network settings)**

- When the Execute button is clicked, the unit's settings are returned to their defaults.

The following settings are not initialized.

- All the settings under [Setup] → [Basic]
- All the settings under [Setup] → [User mng.]
- All the settings under [Setup] → [Server]
- All the settings under [Setup] → [Network] → [SNMP]
- [Setup] → [Maintenance] → [System log] system log history

When the initialization operation is started, no operations can be undertaken for about 2 minutes.

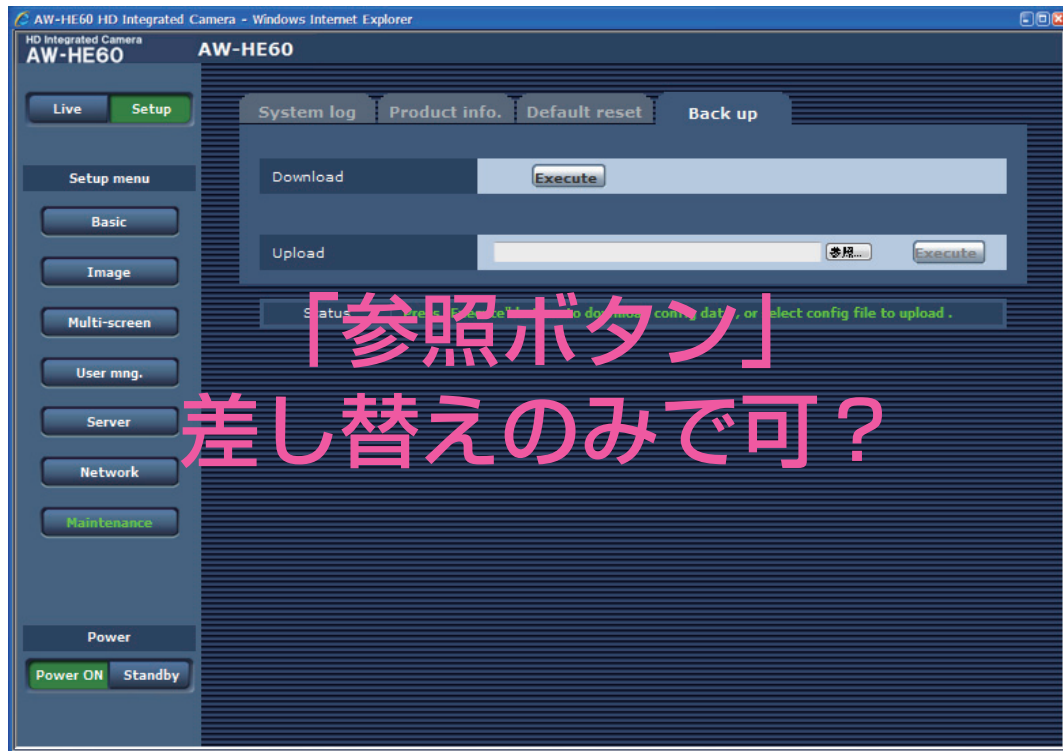
- **Reboot**

- When the Execute button is clicked, the unit is rebooted. After the unit has been rebooted, no operations can be undertaken for about 2 minutes as is the case when the unit's power is turned on.

Controls and settings from web screen (continued)

Back up screen

On this screen, the unit's settings can be saved to a personal computer or settings saved in a personal computer can be loaded into the unit for use.



• Download

The unit's settings are saved in the personal computer. After displaying the save destination dialog box using the Execute button, specify the save destination folder.

Listed below are the settings to be saved.

- Scene FullAuto settings
- Scene Manual1 settings
- Scene Manual2 settings
- Scene Manual3 settings
- System settings
- Preset settings

Memo

- It takes about 10 seconds after the Execute button has been clicked for the save destination dialog box to appear.

• Upload

The unit's setting files, which were saved in the personal computer by the download function, are uploaded. Click the Browse button to display the dialog box, and specify the saved file.

Uploading starts when the Execute button is clicked. The uploading is completed in about 2 minutes, after which a popup display notifying the user that the uploading is completed appears.

Notes

- Use the files downloaded by the unit as the data to be used for uploading. Do not change the extension (.dat) of the files which have been downloaded.
- Do not turn off the unit's power while downloading or uploading is underway.
- Do not attempt to perform any operations while downloading or uploading is underway. Instead, wait until the downloading or uploading is completed.

■ Displaying the web screen using a mobile terminal

Connect the mobile terminal to the unit, and display the unit's images (MJPEG format only). Refreshing to the latest images takes place automatically. Operations such as panning, tilting and zooming can also be performed from the mobile terminal. The following models are supported as mobile terminals (as of xxx 2012).

Mobile terminal	Specifications
iPad iPhone iPod touch	iOS 5.0 + Sarari 5.1 or later
Android™ terminals	Panasonic TOUGHPAD FZ-A1

- Use a standard browser with an Android terminal.
- Images are displayed only in the JPEG format when using the standard browser of an Android terminal.

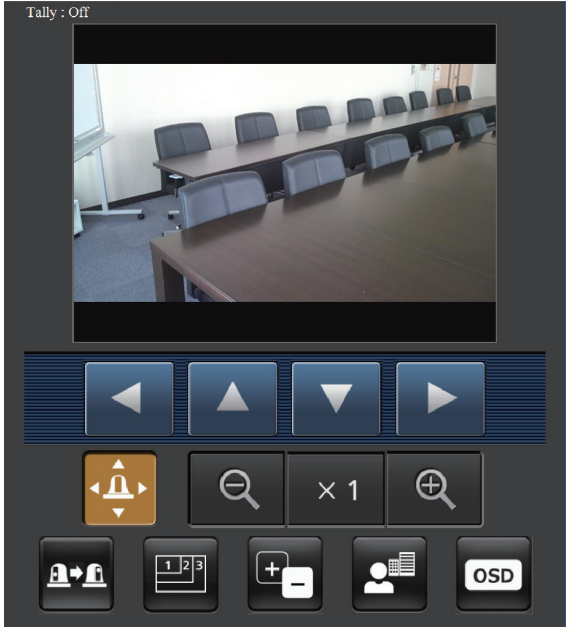
✎ Memo ✎


- Input the user name and password if the authorization dialog box is displayed. The initial settings for the user name and password are given below.





User name	admin
Password	12345




- In order to ensure security, the password for the user name of "admin" must be changed without fail. (see page 84)
- If the mobile terminal does not support the character code UTF-8, the characters cannot be displayed properly.

- 1 Input "http://IP address/mobile/" *1 using the mobile terminal, and press the enter button. The unit's images will now be displayed.
***1: This IP address is the global IP address for the WAN of the router that enables internet access. However, it is the local IP address if the unit in the same LAN is to be accessed using a mobile terminal which supports a wireless connection.**



- **Pan/Tilt**  When this button is pressed, the buttons for performing the pan/tilt operations are displayed on the screen.

	The camera is panned toward the left.
	The camera is tilted upward.
	The camera is tilted downward.
	The camera is panned toward the right.

- **Zoom**
The unit's zooming operations are performed using these buttons.
- | | |
|---|--|
|  | Use this to adjust the zoom (magnification) in the Wide direction. |
|  | Use this to adjust the zoom (magnification) to 1.0x. |
|  | Use this to adjust the zoom (magnification) in the Tele direction. |

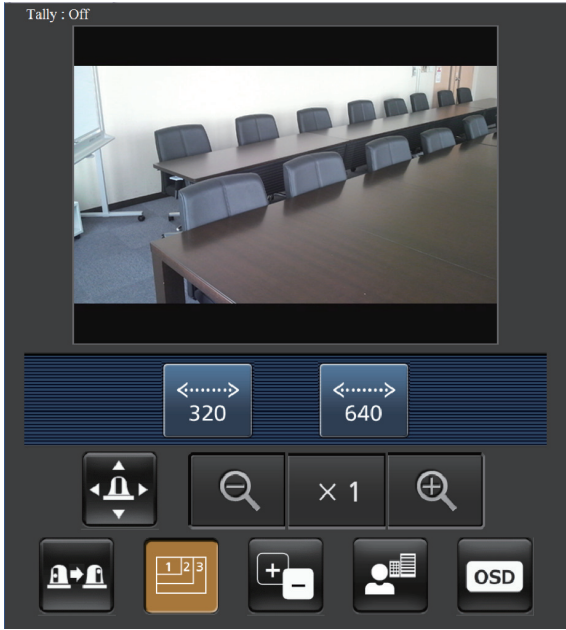


●

Preset

When this button is pressed, the buttons for selecting the preset positions are displayed on the screen.

	When one of the displayed buttons is pressed, the camera's pan/tilt position moves to the preset position that was registered ahead of time.
	The settings that are reproduced at this position are the settings which were established on the "Preset Scope" menu (see pages 49, 78 and 81).



●

Resolution switching

When this button is pressed, the buttons for selecting the resolution are displayed on the screen.
If "Off" is selected as the "16:9 resize" setting among the IP video settings (Video over IP), the unit's images are displayed using the aspect ratio of 4:3.
If "On" is selected as the "16:9 resize" setting, the unit's images are displayed using the aspect ratio of 16:9. (see page 66)

	The images are displayed with a resolution of 320 × 240 pixels.
	The images are displayed with a resolution of 640 × 480 pixels.

Note

- Depending on the type of mobile terminal used, the resolution for displaying the images will change but the image size may not change even when the "Resolution switching" button is pressed.



- Iris

When this button is pressed, the buttons for performing the iris operations are displayed on the screen.

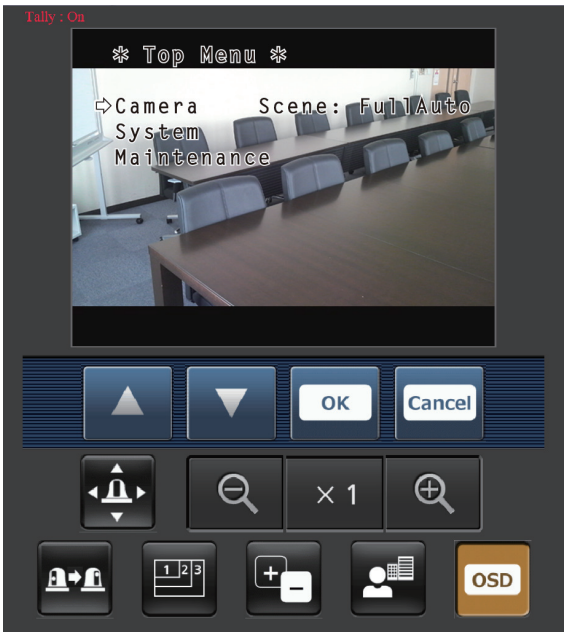
	This switches the iris between auto and manual. At the auto setting, the button label is green.
	This adjusts the movement of the iris in the “close” direction.
	This adjusts the movement of the iris in the “open” direction.



- Focus

When this button is pressed, the buttons for performing the focusing operations are displayed on the screen.

	Use this to switch between auto and manual focusing. When Auto is selected, the focus is adjusted automatically.
	When this is pressed while the focus is being adjusted manually, the focus will be temporarily adjusted automatically. It does not work during automatic adjustments.
	Use this to adjust the focus in the Near direction. It does not work during automatic adjustments.
	Use this to adjust the focus in the Far direction. It does not work during automatic adjustments.



● Camera menu (OSD menu) operation



When this button is pressed, the buttons for performing the camera menu operations are displayed on the screen. At the same time, the camera menus are displayed on the unit's images.

	The unit's camera menu operations can be performed by pressing the , , and buttons. When any of these buttons is pressed to switch to an operation that does not involve a camera menu, the camera menus are no longer displayed on the unit's images.

● Tally lamp lighting status displays

The lighting status of the camera's tally lamp is monitored at regular intervals while the camera is connected, and the lamp's display is updated.

	If the tally lamp is off, "Tally: Off" is displayed in white.
	If the tally lamp is on, "Tally: On" is displayed in red.

Notes

- It may take 2 seconds or so for a change in the lighting status of the tally lamp to be reflected on the display of the mobile terminal.
- When "Disable" is selected for "Tally Enable" (page 50, page 81) the camera's tally lamp will not light even when the tally signal is input. However, the characters indicated for the tally lamp lighting status displays will turn red.

Memo

- If the HTTP port number has been changed from "80," input "http://IP address/mobile/" *1 to specify the unit's port number.
- Input the user name and password if the authorization dialog box is displayed. The initial settings for the user name and password are given below.

User name	admin
Password	12345

Depending on the mobile terminal, it may be necessary to input the password each time the screen changes.

- If the images are large, it may not be possible to display them on some mobile terminals. In a case like this, it may be possible to display the images if a setting close to low image quality is selected for "Image quality" (page 67) of the "JPEG image settings" among the "Video over IP".
- Access may not be possible depending on the mobile terminal used and its agreement plan.

*1: This IP address is the global IP address for the WAN of the router that enables internet access. However, it is the local IP address if the unit in the same LAN is to be accessed using a mobile terminal which supports a wireless connection.

System log displays

NTP-related error displays

Category	Display	Description of error
Connection error	No response from the NTP server.	<ul style="list-style-type: none">• The IP address of the server may be incorrect. Check the server's IP address settings again.• The NTP server may be down. Consult your server administrator.
Internal error	Undefined error.	<ul style="list-style-type: none">• A problem has occurred in the NTP function. Check the NTP settings again.
Successful NTP-based time synchronization	NTP update succeeded.	<ul style="list-style-type: none">• The time has been updated successfully.

Login-related displays

Category	Display	Description of error
Login	(User name or IP address)	<ul style="list-style-type: none">• If user authorization has been set, the name of the user who has logged onto the unit is displayed.• If host authorization has been set, the IP address of the user who has logged onto the unit is displayed.

Limiters

This unit comes with settings (referred to as “limiters”) that restrict the panning and tilting movement ranges.

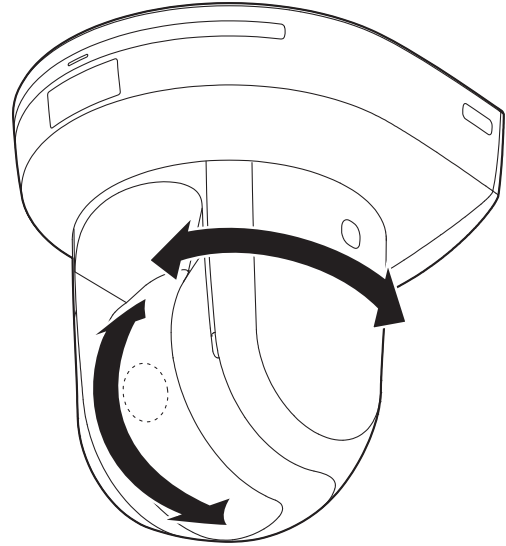
Depending on where the unit has been installed, a subject which the user does not wish to be shot may be present in the movement ranges.

In a case like this, the unit's shooting range can be limited by setting the limiters at the positions just before the subject which the user does not wish to be shot.

The positions of four limiters — namely, the upper, lower, left-most and right-most limits of the travel range — can be set. Once they have been set, the positions will not be lost even after the power has been turned off.

The limiters can be set or released both by the wireless remote control and controller or web setting screen. Whatever was set or released last takes precedence. For the controller operations, refer to the Operating Instructions of the controller.

The settings of the limiters using the wireless remote control will be described here.



Setting/releasing the limiters

■ Basic limiter operations

1 Press the [MENU] button.

Tap the button (rather than pressing it).
When it is pressed for 2 seconds, the camera menu will appear.
If this happens, press the [MENU] button again for 2 seconds to clear the camera menu.
Then start again from step 1.

2 Press the [▲], [▼], [◀] or [▶] button for 2 seconds while holding down the [PRESET] button.

The limiter for the upper limit, lower limit, left limit or right limit is set (or released) using these direction buttons, respectively.
The tally lamp will blink at this time.
When a limiter is set, it blinks once; when a limiter is released, it blinks twice.
If any other button was operated between steps 1 and 2, start again from step 1.

■ Setting the limiters

The limiter positions can be set by following the steps below.
When the position is set, the tally lamp blinks once.

1 Press one of the [CAM1] to [CAM4] buttons to select the unit.

- **Setting the upper limit position of the movement range**

Press the [▲] or [▼] button of the wireless remote control to turn the unit as far as the position which will serve as the upper limit.

Next, perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▲] button for 2 seconds while holding down the [PRESET] button.)

- **Setting the lower limit position of the movement range**

Press the [▲] or [▼] button of the wireless remote control to turn the unit as far as the position which will serve as the lower limit.

Next, perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▼] button for 2 seconds while holding down the [PRESET] button.)

- **Setting the left-most limit position of the movement range**

Press the [◀] or [▶] button of the wireless remote control to turn the unit as far as the position which will serve as the left-most limit.

Next, perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [◀] button for 2 seconds while holding down the [PRESET] button.)

- **Setting the right-most limit position of the movement range**

Press the [◀] or [▶] button of the wireless remote control to turn the unit as far as the position which will serve as the right-most limit.

Next, perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▶] button for 2 seconds while holding down the [PRESET] button.)

■ Releasing the limiters

The limiter positions that are set can be released by following the steps below.

When the position is released, the tally lamp blinks twice.

- 1 Press one of the [CAM1] to [CAM4] buttons to select the unit.**
- 2 Release the limiters by taking the steps below.**
 - **Releasing the upper limit position of the movement range**
Perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▲] button for 2 seconds while holding down the [PRESET] button.)
 - **Releasing the lower limit position of the movement range**
Perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▼] button for 2 seconds while holding down the [PRESET] button.)
 - **Releasing the left-most limit position of the movement range**
Perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [◀] button for 2 seconds while holding down the [PRESET] button.)
 - **Releasing the right-most limit position of the movement range**
Perform the steps in “Basic limiter operations”.
(Press the [MENU] button quickly and then press the [▶] button for 2 seconds while holding down the [PRESET] button.)

■ Resetting the limiters

To reset the limiters, the currently established settings must be released.

The limiter positions that are set can be reset by following the steps below.

- 1 Release the settings of the limiter positions to be reset by following the steps in “Releasing the limiters”.**
- 2 Set the limiter positions by following the steps in “Setting the limiters”.**

Safe mode

■ Concerning the safe mode

The unit is equipped with a safe mode for protection from damage.

When a safe mode is established, some or all of operations will no longer be accepted.

Trouble-triggered safe mode

When the unit has detected trouble, the “trouble-triggered safe mode” is established: In this mode, the unit’s functions are shut down and then the unit is returned to its regular status in about 30 seconds after it has been started up again or the initial setting operation is performed.

(When the unit has detected trouble again, the “trouble-triggered safe mode” will be established again.)

Note

- The output of pictures might be suspended when the safe mode is established.
In this case, the output of pictures will be restarted about 5 to 10 seconds later.

Notes on Windows® 7

When using Microsoft® Windows® 7, symptoms described in this document may happen.

If any of them occurred, follow the instructions to solve each problem.

This document describes solutions for administrators.

- If necessary, install the viewer software.
Refer to the Operating Instructions of each device for details on how to install the viewer software.
- Descriptions in this document are based on operation check by Panasonic Corporation.
Possible symptoms may vary depending on platforms or operating system versions, etc.

■ System requirements for a personal computer

Refer to the section “System requirements for a personal computer” in the installation guide or Operating Instructions provided with the product to be used for further information about the recommended specifications of a personal computer.

In case there are no descriptions of Windows® 7, refer to the following.

CPU	Intel® Core™ 2 Duo 2.4 GHz or faster	
Memory	1 GB or more	
Network interface	10BASE-T/100BASE-TX 1 port	
Monitor	1024 × 768 pixels or more, 24-bit True color or better	
OS and web browser	Windows® 7 Professional SP1 64-bit*1 Windows® 7 Professional SP1 32-bit*1	Windows® Internet Explorer® 8.0*2 Windows® Internet Explorer® 9.0*2

*1: Windows® XP compatibility mode is unavailable.

*2: Internet Explorer® 8.0 64-bit version is unavailable.

■ Trademarks and Registered Trademarks

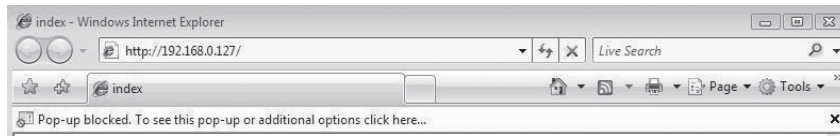
- Microsoft, Windows, Windows 7 and Internet Explorer are registered trademarks of Microsoft Corporation in the United States and other countries.
- Intel and Intel Core are trademarks or registered trademarks of Intel Corporation in the United States and other countries.

(Trademarks and registered trademarks are abbreviated in the subsequent descriptions in this document.)

■ Precautions when using Windows 7

Symptom 1

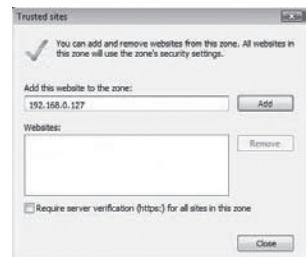
- When accessing the web browser, the following message is displayed on the information bar.
“Pop-up blocked. To see this pop-up or additional options click here...”



Solution

Add the IP address of the product to “Trusted sites”, and perform the security setting.

- Start up the web browser, and click “Internet Options” on the Tools menu.
- Click the [Security] tab. Then, select the “Trusted sites”.
(Refer to the screenshot.)
- Select “Low” for “Security level for this zone”.
(If the lower setting is selected, the security level of personal computer will go down.)
- Click the [Sites] button to open the “Trusted sites” window.
- Enter the IP address in the textbox “Add this website to the zone:”, and click the [Add] button.
Note: Make sure “Require server verification (https:) for all sites in this zone” is unchecked. (Refer to the screenshot.)
- After adding all IP addresses, click the [Close] button to close the “Trusted Sites” window.



Notes on Windows® 7 (continued)

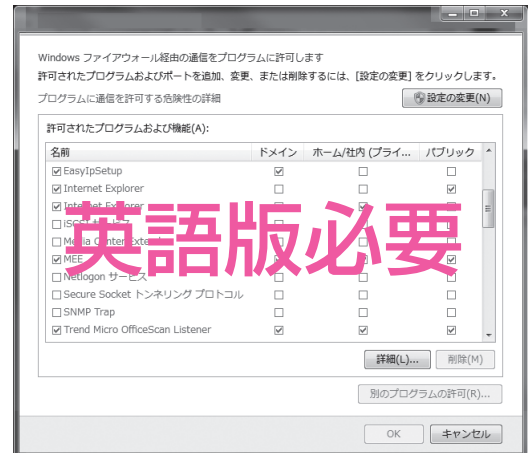
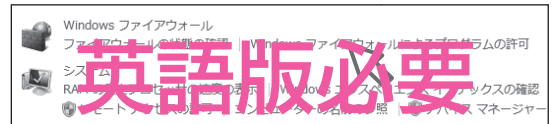
Symptom 2

- Easy IP Setup Software does not display the detected IP address.

Solution

Check the firewall settings. If a firewall is activated, set the web browser or Easy IP Setup Software to the “Allow a program through Windows Firewall” setting.

- ① Open the control panel, and click “System and Security”.
- ② Click “Allow a program through Windows Firewall” of “Windows Firewall”. (Refer to the screenshot.)
- ③ Select the “Internet Explorer” or “EasyIPSetup” line, and then click the “Change settings” button.
Check “Internet Explorer” or “EasyIPSetup”. (Refer to the screenshot.)
- ④ Click the [OK] button.



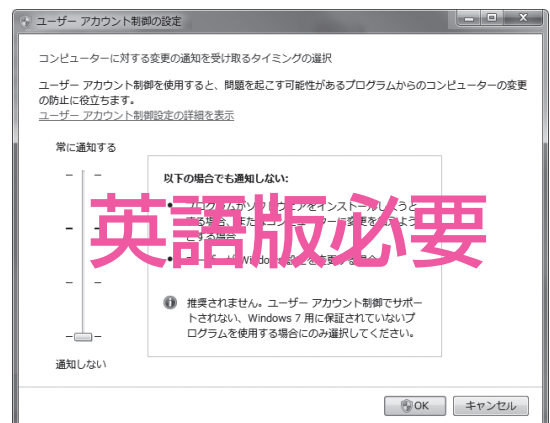
Symptom 3

- When starting the Easy IP Setup Software, a message is displayed to request the password of administrator.
- When exiting the Easy IP Setup Software, the message “This program might not have installed correctly” is displayed.

Solution

Turn off User Account Control (UAC) from the control panel of Windows 7.

- ① Open the control panel, and click “System and Security”.
- ② Click “Change User Account Control Settings” on the “Action center” window.
- ③ Slide the gauge of the slide bar to the “No notification” position, and click the [OK] button.



Notes on Windows® 7 (continued)

Symptom 4

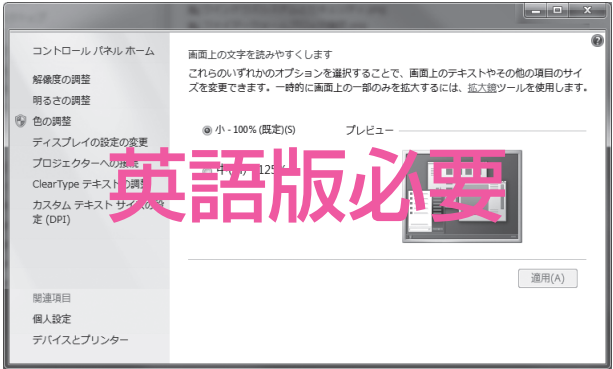
- The screens of the administrator console or the windows of the browser are not displayed properly. (Refer to the screenshot.)



Solution

Check the character size of the screenshot by clicking “Display” of “Personalize”.
If the character size is set to “Larger scale”, set it to “Default scale”.

- ① Right-click on the desktop.
- ② Click “Personalize”.
- ③ Click “Display”.
- ④ Select “Small-100% (Default scale)” for the character size of the screenshot, click the [Apply] button, and reboot the personal computer.



● Restrictions

Restriction 1	When two browser windows are open and one is being displayed on another The back window may come to the front when the mouse pointer is placed.
Restriction 2	When accessing this product from the web browser Another window may open, and pop-up may be displayed.

Notes on Windows® 7 (continued)

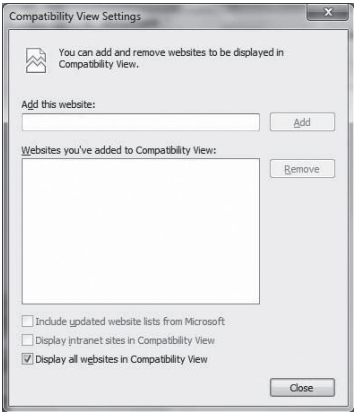
Symptom 5

- Screen is deformed. / When activating the compatibility view, part of the screen is not displayed or a pop-up window appears to say that the screen is not displayed again.

Solution

Check “Display all websites in Compatibility View” on the “Compatibility View Settings” window.

- ① Start up the web browser, and click “Tools” on the menu bar.
- ② Click “Compatibility View Settings”.
- ③ Check “Display all websites in Compatibility View”, and click the [Close] button.
(Refer to the screenshot.)



Symptom 6

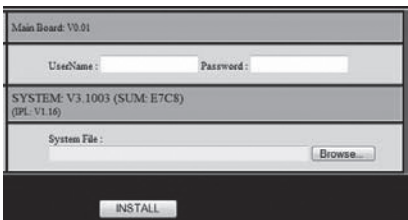
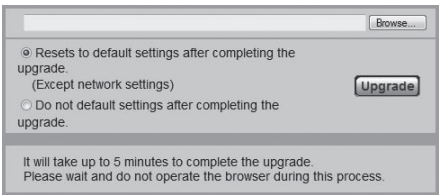
- Network disconnection occurs when the personal computer enters the sleep mode.

Solution

After canceling the sleep mode, reload the screen as necessary.

Symptom 7

- Characters such as a file name cannot be entered directly on the window or tab to upgrade the software.
(Refer to the screenshot.)



Solution

Click the [Browse...] button to display the “File Selection” window to select a file.

Notes on Windows® 7 (continued)

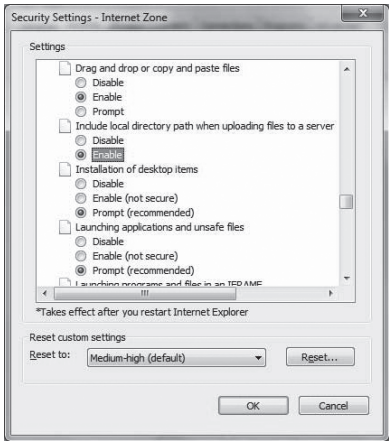
Symptom 8

- Software upgrade is impossible even when selecting a file from the dialog box displayed from the window or tab to upgrade the software.

Solution

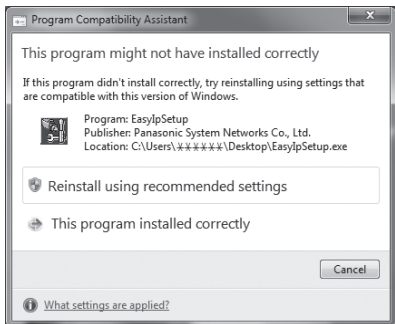
Perform the custom level setting on the “Security Settings” window.

- ① Start up the web browser, and click “Tools” on the menu bar.
- ② Select “Internet Options”.
- ③ Click the “Security” on the displayed window, and click the [Custom Level...] button.
- ④ Click “Include local directory path when uploading files to a server” to activate the setting. (Refer to the screenshot.)



Symptom 9

- The “Program Compatibility Assistant” is displayed after exiting the Easy IP Setup Software. (Refer to the screenshot.)



Solution

This symptom happens only when the software has been used for the first time. Select “This program installed correctly”.

● Restrictions

Restriction 1	On the setup pages for some products The display positions of setting items and setting values may not be correspondent.
Restriction 2	When using Windows 7 with some products Two web browser windows may be displayed at the same time.

Index

A

Menu	Access interval	71
Menu	Access level	66, 67
Menu	AGC Max Gain	40, 59
Menu	AutoF. Mix Max Gain	40, 59
	Automatic adjustment (AWB)	22
	Auto tracking white adjustment (ATW)	24
Menu	AWB	60
Menu	AWB Mode	41, 60
	AW-RP50	37
	AW-RP555	35
	AW-RP655	33

B

Menu	Back Light COMP.	42, 60
	Back up screen	77
Menu	Bandwidth control(bit rate)	70
	Basic button	56
	Basic screen	56
Menu	Brightness	55, 62

C

Menu	CAM/BAR	78
Menu	Camera	38
	Camera screen	39
	Camera title	56
	Camera title display area	56
	Changing the format	45
Menu	Chroma Level	41, 60
Menu	Color Matrix	41, 60
	Color phase adjustment	28
Menu	Community	72
	Concerning initialization	49
Menu	Contact	72
Menu	Contrast Level	39, 40, 59
Menu	Contrast Mode	40, 59
	Contrast screen	40
	Control button / Setup button	53
	Control pad and its buttons	55, 62
	Control screen	54
Menu	CPU Software	
	Camera Main	48, 74
	Network	48, 74
	Pan/Tilt	48, 74

D

Menu	DDNS	71
	DDNS screen	71
Menu	Default gateway	70
	Default reset screen	76
Menu	Detail	41, 60
Menu	DHCP	69
Menu	Digital Zoom	46, 65
Menu	DNR	41, 60
Menu	DNS	70
Menu	Down CONV. Mode	43, 64
Menu	Download	77
Menu	DRS	42, 60

E

Menu	Easy IP Setup accommodate period	70
Menu	Error description	73

F

Menu	Firmware version	74
Menu	Firmware Version	48
	Firmware Version screen	48
Menu	Flesh Tone Mode	41, 60
Menu	Focus	54, 61
Menu	Focus ADJ With PTZ.	46, 65
Menu	Focus Mode	46, 65
Menu	Format	43, 64
Menu	Frame Mix	40, 59
Menu	FTP access to camera	70

G

Menu	Gain	40, 59
Menu	Gamma Level	42, 60
Menu	Gamma Type	42, 60
Menu	Genlock	42, 63
	Genlock screen	43

H

Menu	HDMI Color	44, 64
Menu	Horizontal Phase	43, 63
	Horizontal phase adjustment	27
Menu	Host auth.	67
	Host auth. screen	67
Menu	Host check	67
Menu	Host name	71
Menu	H Phase. SC Fine Step	43
Menu	HTTP port	70

I

	Image	57
Menu	Image adjust	57
	Image adjust screen	58
	Image screen	57
	Initialize	49
Menu	Initialize	48
Menu	Install Position	46, 65
Menu	IP address	67, 69
Menu	IP network	69

L

Menu	Limitation Setting	62
Menu	Line speed	70
Menu	Load the default HTML files	76
Menu	Location	72

M

Menu	MAC address	74
	Maintenance	73
Menu	Maintenance	38
	Maintenance screen	48
Menu	Model no.	74
	Multi-Function Controller	33
	Multi Hybrid Control Panel	35

Index (continued)

N

	Network	69
	Network screen	69
Menu	No	73
Menu	NTP port	68
	NTP screen	68
Menu	NTP server address	68

O

Menu	OSD Off With Tally	47
Menu	OSD Status	47, 65
Menu	Other	42, 65
	Other 1/2 screen	46
	Other 2/2 screen	47
	Other screen	78
Menu	Output	42, 64
	Output screen	43

P

Menu	Password	66, 71
Menu	Pedestal	42, 60
Menu	Picture	39, 60
	Picture 1/2 screen	41
	Picture 2/2 screen	42
Menu	PLD	
	Camera	48, 74
	Output	48, 74
	Power ON button / Standby button	53
Menu	Preset	55, 61
	Preset memories	19
Menu	Preset position	57
	Preset position setting screen	61
Menu	Preset Scope	46, 65
Menu	Preset Speed	46, 65
Menu	Primary server address	70

R

Menu	Reboot	76
	Remote Camera Controller	37
Menu	Reset to the default	76
Menu	Reset to the default and load the default HTML files	76

S

Menu	Scene	39, 59
Menu	Secondary server address	70
Menu	Serial no.	74
	Server	68
	Setup screen	56
Menu	Shutter Mode	40, 59
	Shutter speed	17, 40, 59
	SNMP screen	72
Menu	Speed With Zoom POS.	46, 65
Menu	Step/Synchro	40
Menu	Subcarrier Phase	
	Coarse	43, 63
	Fine	43, 63
Menu	Subnet mask	70
Menu	System	38
	System log screen	73
Menu	System name	72
	System screen	42, 63

T

Menu	Tally Enable	47, 65
Menu	Time adjustment	68
Menu	Time adjustment interval	68
Menu	Time & date	73
Menu	Time zone	68
Menu	Top Menu	38
	Top Menu screen	38

U

	Upgrade screen	74
Menu	Upload	77
Menu	User auth.	66
	User auth. screen	66
Menu	User check	66
	User mng.	66
Menu	User name	66, 71

W

Menu	Wireless Control	47
-------------	------------------------	----

Z

Menu	Zoom	54, 61
-------------	------------	--------

未更新

Memo

